

June 28, 2006

Mr. Chuck Zimmerman Brown and Caldwell 3264 Goni Rd., Suite 153 Carson City, NV 89706

Dear Mr. Zimmerman:

Enclosed is the quality assurance review of the analytical data for the analyses of the 15 filter samples that were collected on February 4, 2006, in association with the ARCO Yerington Mine Site (Event 63). The samples were collectively analyzed for gross alpha, gross beta, radium-226, radium-228, thorium-238, thorium-230, thorium-232, uranium-234, uranium-235, and uranium-238.

Based on this quality assurance review, one thorium-230 result was qualified as "not-detected" due to method blank contamination. In addition, the isotopic thorium results of one sample were qualified as biased high estimates due to high chemical yield, and a few gross alpha, radium-226, and radium-228 results were qualified as estimated due to positive results reported between the method detection limit and the reporting limit.

It should be noted that the background checks for the gross alpha and gross beta analyses were not included in the data package submitted for review. The data reviewer requested these background checks from the laboratory; however, the laboratory failed to provide them (as of the date of this report).

Concurred by:

Principal

If you have any questions or comments, please do not hesitate to call.

Sincerely,

Konstadina Vlahogiani, M.S. Senior Quality Assurance Chemist III/ Project Manager

KV/RJV:hm/jm Enc.

cc: Mr. Guy Graening – Brown and Caldwell

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Technical Director of Chemistry/



QUALITY ASSURANCE REVIEW OF THE SAMPLES COLLECTED AT THE ARCO YERINGTON MINE SITE ON FEBRUARY 4, 2006 (EVENT 63)

June 28, 2006

Prepared for:

ATLANTIC RICHFIELD COMPANY

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Prepared by:

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Issued to:

BROWN AND CALDWELL

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1.0 Introduction

This quality assurance (QA) review is based upon a rigorous examination of all data generated from the analyses of the 15 filter samples that were collected by Brown and Caldwell on February 4, 2006, in association with the ARCO Yerington Mine Site (Event 63). The samples included in this QA review are specified on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Inorganic Data Review" (US EPA, 2/94). The aforementioned document is not entirely applicable to the type of analyses and analytical protocols performed on the samples evaluated in this QA review, but it has been used with professional judgment to aid the data reviewer in the interpretation of the QC analysis results and in the overall evaluation of the sample data deliverables. It should also be noted that results affected by blank contamination will be designated with a "UJ" qualifier (not the "U" qualifier typically used when following the National Functional Guidelines) in order to be consistent with historical project validation protocols and the current project database.

The reported analytical results are presented as a summary of the data in Section 2. Data were examined to determine the usability of the analytical results and the compliance relative to the requirements specified in the published analytical methods, the Severn Trent Laboratories, Inc. (STL) analytical Standard Operating Procedures (SOPs), the Quality Assurance Project Plan (QAPjP) for the Atlantic Richfield Company Yerington Mine Site (September 2003), and the Technical Requirements For Environmental Laboratory Analytical Services, BP Global Contract Lab Network (GCLN) (5/22/02, Revision 08). Qualifier codes have been placed next to results to enable the data user to quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data's end-user to best understand the usability of the analytical results. Data not qualified in this report should be considered valid based on the QC criteria that have been reviewed. Details of this QA review are presented in Section 1 of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1
SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Field Sample Identification	Laboratory Sample Identification	SDG Number	Matrix	Date Sample Collected	Parameters Examined
P-0510	J6B270158-1	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0511	J6B270158-2	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0512	J6B270158-3	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0513	J6B270158-4	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0514	J6B270158-5	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0515	J6B270158-6	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0516 (Field Duplicate of P-0510)	J6B270158-7	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
P-0517 (Field Blank)	J6B270158-8	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000357	J6B270158-9	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000358	J6B270158-10	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000359	J6B270158-11	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000360	J6B270158-12	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000361	J6B270158-13	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000362	J6B270158-14	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U
000363 (Trip Blank)	J6B270158-15	31025	Filter	2/4/06	α, β, ²²⁶ Ra, ²²⁸ Ra, Th, U

TABLE 1 (Cont.)

NOTES:

 α - Gross Alpha by STL SOP RICH-RC-5014/5016 (based on US EPA Method 900.0). Gross Beta by STL SOP RICH-RC-5014/5016 (based on US EPA Method 900.0). Radium-226 by STL SOP RICH-RC-5005 (based on US EPA Method 903.1). Radium-228 by STL SOP RICH-RC-5005 (based on US EPA Method 904.0). The Thorium-228, Thorium-230, and Thorium-232 by STL SOP RICH-RC-5087. Uranium-234, Uranium-235, and Uranium-238 by STL SOP RICH-RC-5067

(based on US EPA Method 908.0).

2.0 Findings

Complete support documentation for this radiological analysis QA review is presented in Section 8.0 of this report. The cover sheet for this section is a checklist of all QA procedures required by the protocols and examined in this data review.

A. Gross Alpha Analysis

Fifteen samples were analyzed for gross alpha by STL SOP RICH-RC-5014/5016 (based on US EPA Method 900.0). The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			
LCS Recoveries	√			
Field Duplicate Precision	√			
Efficiency Checks	√			
Background Checks	NP			
Traceability Documents	√			
Sample Preparation	√			
Quantitation of Results			V	
Evaluation of Raw Data	√			

NP: Not Provided by the laboratory.

<u>Quantitation of Results:</u> All positive results reported at concentrations greater than the method detection limit (MDL) but less than the reporting limit (RL) were qualified as estimated and flagged "J" on the data tables.

B. Gross Beta Analysis

Fifteen samples were analyzed for gross beta by STL SOP RICH-RC-5014/5016 (based on US EPA Method 900.0). The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			
LCS Recoveries	√			
Field Duplicate Precision	√			

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Efficiency Checks	V			
Background Checks	NP			
Traceability Documents	$\sqrt{}$			
Sample Preparation	$\sqrt{}$			
Quantitation of Results	$\sqrt{}$			
Evaluation of Raw Data	$\sqrt{}$			

NP: Not Provided by the laboratory.

No findings were observed for the gross beta fraction.

C. Radium-226 Analysis

Fifteen samples were analyzed for radium-226 by STL SOP RICH-RC-5005 (based on US EPA Method 903.1). The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	\checkmark			
LCS Recoveries	√			
Chemical Yield	√			
Field Duplicate Precision	\checkmark			
Instrument Performance Checks	√			
Background Checks	√			
Traceability Documents	√			
Sample Preparation	√			
Quantitation of Results			V	
Evaluation of Raw Data	√			

Quantitation of Results: All positive results reported at concentrations greater than the MDL but less than the RL were qualified as estimated and flagged "J" on the data tables.

D. Radium-228 Analysis

Fifteen samples were analyzed for radium-228 by STL SOP RICH-RC-5005 (based on US EPA Method 904.0). The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			
LCS Recoveries	√			
Chemical Yield	√			
Field Duplicate Precision	√			
Efficiency Checks	√			
Background Checks	√			
Traceability Documents	√			
Sample Preparation	√			
Quantitation of Results			V	
Evaluation of Raw Data	√			

Quantitation of Results: All positive results reported at concentrations greater than the MDL but less than the RL were qualified as estimated and flagged "J" on the data tables.

E. Thorium-228, Thorium-230, and Thorium-232 Analysis

Fifteen samples were analyzed for thorium-228, thorium-230, and thorium-232 by STL SOP RICH-RC-5087. The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results			V	
LCS Recoveries	√			
Chemical Yield			V	
Field Duplicate Precision	√			
Energy Calibration Check	√			
Efficiency Calibration Check	√			
Background Check	√			- /
Full Width at the Half Maximum	√			
Traceability Documents	√			
Sample Preparation	√			
Quantitation of Results	√			4

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Evaluation of Raw Data	V			

<u>Blank Analysis Results:</u> Thorium-230 was observed to be present in the method blank associated with sample P-0514. The positive result for thorium-230 in sample P-0514 should be considered "not-detected" and has been flagged "UJ" on the data tables.

<u>Chemical Yield:</u> The chemical yield (143%) of the isotopic thorium analysis of sample P-0513 exceeded the upper acceptance limit (115%). This sample was reanalyzed for isotopic thorium; however, the chemical yield (124%) still exceeded the upper acceptance limit. The positive results for thorium-228, thorium-230, and thorium-232 in sample P-0513 should be considered biased high estimates and have been flagged "J" on the data tables.

F. Uranium-234, Uranium-235, and Uranium-238 Analysis

Fifteen samples were analyzed for uranium-234, uranium-235, and uranium-238 by STL SOP RICH-RC-5067 (based on US EPA Method 908.0). The findings offered in this report for this fraction are based on the items on the following table.

Item Reviewed	Acceptable	Acceptable With Discussion	Acceptable With Qualification	Not Acceptable
Holding Times	√			
Blank Results	√			
LCS Recoveries	√			
Chemical Yield	√			
Field Duplicate Precision	√			
Energy Calibration Check	√			
Efficiency Calibration Check	√			
Background Check	√			
Full Width at the Half Maximum	√			
Traceability Documents	√			
Sample Preparation	√			
Quantitation of Results	√			
Evaluation of Raw Data	√			

No findings were observed for the isotopic uranium fraction.

3.0 Qualifier Summary Tables

A. Gross Alpha Analysis

Analyte	SDG Number	Samples	Validation Qualifier	Reason for Qualification
gross alpha	31025	P-0513, P-0514, P-0515, 000357, 000359, 000360, 000361, and 000362	J	positive result reported between the MDL and RL

B. Gross Beta Analysis

Analyte	SDG Number	Sample	Validation Qualifier	Reason(s) for Qualification
Qualification of Data Was Not Warranted				

C. Radium-226 Analysis

Analyte	SDG Number	Sample	Validation Qualifier	Reason for Qualification
radium-226	31025	000360	J	positive result reported between the MDL and RL

D. Radium-228 Analysis

Analytes	SDG Number	Samples	Validation Qualifier	Reason for Qualification
radium-228	31025	P-0516, 000358, 000359, and 000360	J	positive result reported between the MDL and RL

E. Thorium-228, Thorium-230, and Thorium-232 Analysis

Analyte	SDG Number	Samples	Validation Qualifier	Reasons for Qualification
thorium-230	31025	P-0514	UJ	blank contamination
thorium-228, thorium-230, and thorium-232	31025	P-0513	J	high chemical yield

F. Uranium-234, Uranium-235, and Uranium-236 Analysis

Analyte	SDG Number	Sample	Validation Qualifier	Reason(s) for Qualification
Qualification of Data Was Not Warranted				

4.0 Overall Assessment

Based on this quality assurance review, one thorium-230 result was qualified as "not-detected" due to method blank contamination. In addition, the isotopic thorium results of one sample were qualified as biased high estimates due to high chemical yield, and a few gross alpha, radium-226, and radium-228 results were qualified as estimated due to positive results reported between the MDL and the RL.

5.0 Radiological Data Qualifiers and Valid Reason Codes

Radiological Data Qualifiers

- U Analyte not detected at the detection limit concentration.
- J Reported value is an estimated concentration.
- UJ Analyte not detected at an estimated detection limit concentration.
- R These data were rejected and were not used for any purposes.
- UR The analyte was not detected. The detection limit is unreliable and may be representative of a false negative. These data were rejected and are not usable for any purpose.

Valid Reason Codes

- 1 Holding time violation
- 2 Method blank contamination
- 3 Surrogate recovery
- 4 Matrix spike/matrix spike duplicate recovery
- 5 Matrix spike/matrix spike duplicate precision outside limits
- 6 Laboratory control sample recovery
- 7 Field blank contamination
- 8 Field duplicate precision outside limits
- 9 Other deficiencies (including cooler temperature)
- A Absence of supporting QC
- S ICV, CCV or column performance check problem
- Y Initial and continuing calibration blank problem
- M Interference check samples problem
- O Post-digestion spike outside of 85-115%
- F MSA correlation coefficient <0.995, or MSA not done
- G Serial dilution problem

- K DFTPP or BFB tuning problem
- Q Initial calibration problem
- X Internal standard recovery problem
- V Second source standard calibration verification problem
- L Low bias
- Z Retention time problem
- N Counting time error (radionuclide chemistry)
 W Detector instability (radionuclide chemistry)
- C Co-elution of compounds
- Value exceeds linear calibration range
 Interferences present during analysis
 Trace level compound, poor quantitation
- P 1C/2C precision outside of limits B LCS/LCSD precision outside limits
- D Lab Dup/Rep precision outside limits
- H High bias

6.0 Signatures

Report prepared by:

Konstadina Vlahogiani, M.S. Senior Quality Assurance Chemist III/ Project Manager

Report reviewed and approved by:

Rock J. Vitale, CEAC, CPC Technical Director of Chemistry/ Principal

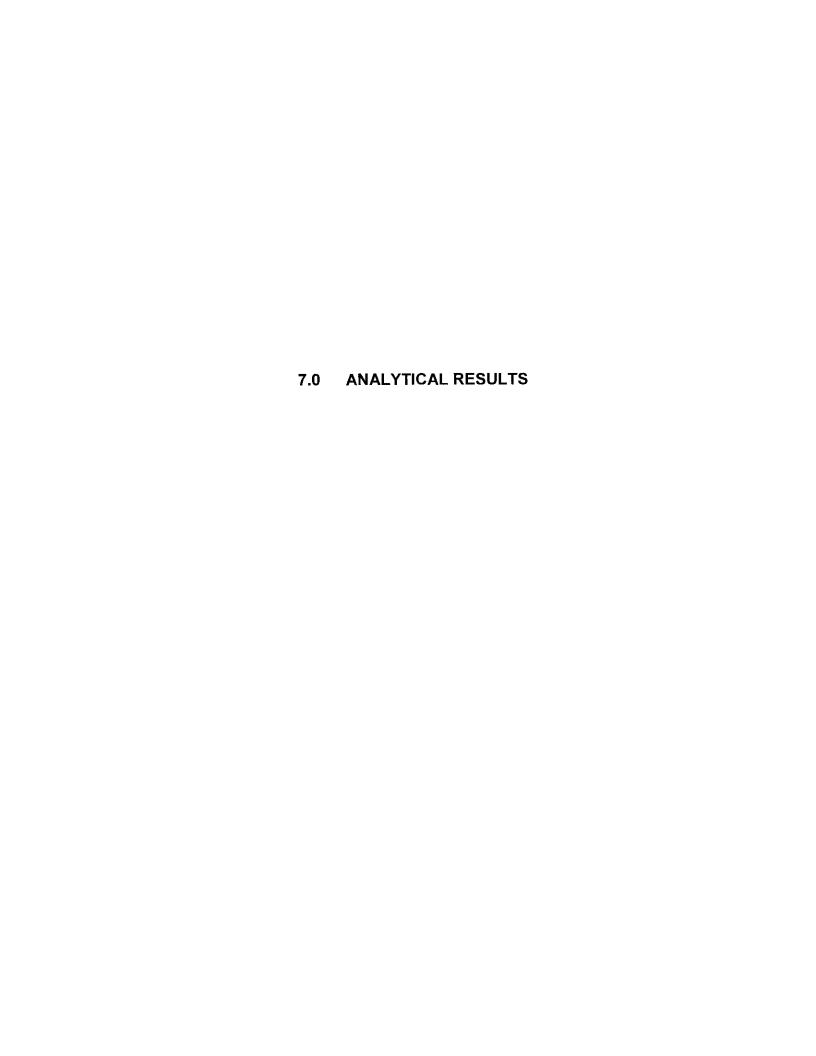
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(610) 935-5577

Report reviewed and approved by

Donald J. Lancaster, M.S. Senior Quality Assurance Chemist II

Date: 6/28/06



			Lab Sample	9HX811	10				9HX812	10				9HX813	10			
			Field Sample	P-0517					000357					000358				
			Collect Date	2/4/2006	3				2/4/2000	3				2/4/2006	i			
			Туре	FB					Ñ					N				
			Parent	AM-1-PN	V10													
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI	0.00995	U	5.27	20	2.1	10.3	J/T	5.18	20	4.9	4.17	U	4.86	20	3.2
	BETA	BETA, GROSS	PCI	1.51	U	5.3	6	2.6	17.6		5.21	6	4.2	16.3		5.34	6	4.1
E903.1	RA-226	RADIUM-226	PCI	0.223	U	0.277	1	0.2	-0.24	U	0.604	1	0.28	0.269	U	0.308	1	0.22
E904.0	RA-228	RADIUM-228	PCI	1.6	U	1.77	3.1	0.92	4.5		2.83	3.1	1.7	1.82	J/T	1.64	3.1	0.93
E908	U-234	URANIUM-234	PCI	-0.0427	U	0.603	1	0.061	0.376	U	0.474	1	0.41	-0.0183	Ü	0.438	1	0.037
	U-235	URANIUM-235	PCI	-0.0213	U	0.511	1	0.043	0	U	0.268	1	0.24	-0.0366	U	0.517	1	0.052
	U-238	URANIUM-238	PCI	-0.0427	U	0.603	1	0.061	0.0791	U	0.474	1	0.2	-0.0183	U	0.438	1	0.037
ISOTH	TH-228	THORIUM-228	PC1	-0.0208	U	0.25	1	0.042	0.14	Ü	0.14	1	0.16	0.0928	U	0.342	1	0.17
	TH-230	THORIUM-230	PCI	0.116	U	0.116	1	0.14	0.0433	U	0.117	1	0.087	0.108	U	0.259	1	0.16
	TH-232	THORIUM-232	PCI	0.0194	U	0.233	1	0.087	0.0433	U	0.117	1	0.087	0	Ü	0.117	1	0.11

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			Lab Sample	9HX814	10				9HX815	10				9HX816	10			
			Field Sample	000359					000360					000361				
			Collect Date	2/4/2006	3				2/4/2006	3				2/4/2006	3			
			Туре	N	· · · · · · · · · · · · · · · · · · ·				N			-		Ν				
			Parent															
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI	6.84	J/T	5.45	20	4.1	16.9	J/T	5.1	20	6.3	9.36	J/T	4.97	20	4.6
	ВЕТА	BETA, GROSS	PCI	18.9		4.71	5	5	25.1		5.06	6	5	24.7		5.18	6	5.1
E903.1	RA-226	RADIUM-226	PCI	0.308	U	0.456	1	0.29	0.563	J/T	0.512	1	0.37	2.09		0.402	1	0.66
E904.0	RA-228	RADIUM-228	PCI	2.26	J/T	1.74	3.1	1	1.85	J/T	1.73	3.1	0.95	21.7		1.49	3.1	3.3
E908	U-234	URANIUM-234	PCI	0.194	Ū	0.262	1	0.28	1.23		0.481	1	0.74	0.828	J/T	0.616	1	0.64
	U-235	URANIUM-235	PCI	-0.0194	U	0.464	1	0.039	0.0655	U	0.515	1	0.2	0	U	0.295	1	0.27
	U-238	URANIUM-238	PCI	0.0968	U	0.262	1	0.19	0.852	J/T	0.441	1	0.61	0.745	J/T	0.498	1	0.6
ISOTH	TH-228	THORIUM-228	PCI	0.059	U	0.549	1	0.24	0.692	J/T	0.125	1	0.37	0.561	J/T	0.354	1	0.39
	TH-230	THORIUM-230	PCI	0.467	J/T	0.33	1	0.34	3.17		0.206	1	0.87	2.2		0.149	1	0.77
	TH-232	THORIUM-232	PCI	0	U	0.149	1	0.13	0.601	J/T	0.116	1	0.33	0.825	J/T	0.149	1	0.44

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			Lab Sample	9HX817	10				9HX818	10				9HX81N	110			
			Field Sample	000362					000363					P-0510				
			Collect Date)				2/4/2006)				2/4/2006	3			
			Туре	N					TB					N				
			Parent						AM-2-TS	SP								
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI	10.9	J/T	5.12	20	5	-0.862	U	4.86	20	1.6	2.11	U	5.96	20	3.1
	BETA	BETA, GROSS	PCI	24.1		5.29	6	5	-1.29	U	5.36	6	2.4	13.2		5.41	6	3.8
E903.1	RA-226	RADIUM-226	PCI	0.114	U	0.387	1	0.22	0.112	U	0.313	1	0.18	0.264	U	0.522	1	0.31
E904.0	RA-228	RADIUM-228	PCI	-0.0378	U	2.25	3.1	0.88	0.618	U	1.66	3.1	0.75	0.752	U	2.51	3.1	1.1
E908	U-234	URANIUM-234	PCI	2		0.605	1	1.1	-0.0089	U	0.448	1	0.018	0.0791	U	0.474	1	0.2
[U-235	URANIUM-235	PCI	-0.00906	U	0.456	1	0.018	0	U	0.302	1	0.27	-0.0198	Ü	0.474	1	0.04
	U-238	URANIUM-238	PCI	0.0769	U	0.605	1	0.23	-0.0089	U	0.448	1	0.018	0	U	0.268	1	0.24
ISOTH	TH-228	THORIUM-228	PCI	0.192	U	0.47	1	0.27	0.0511	U	0.139	1	0.1	0.0452	U	0.42	1	0.18
	TH-230	THORIUM-230	PCI	0.119	U	0.161	1	0.17	0	U	0.129	1	0.12	0.147	U	0.252	1	0.17
	TH-232	THORIUM-232	PCI	0.0595	U	0.161	1	0.12	0	U	0.129	1	0.12	0	U	0.114	1	0.1

			Lab Sample	9HX81Q	10			,,,,,	9HX81R	10				9HX81T	10			
			Field Sample	P-0511					P-0512					P-0513	-			
			Collect Date	2/4/2006	6				2/4/2006	3				2/4/2006				
			Туре	N				•	N					N				
			Parent															
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI	2.92	U	5.97	20	3.3	4.86	U	5.25	20	3.6	9.63	J/T	5.86	20	4.9
	BETA	BETA, GROSS	PCI	11.5		5.03	6	3.6	13.3		5.53	6	3.8	19.1		5.41	6	4.5
E903.1	RA-226	RADIUM-226	PCI	-0.227	U	0.617	1	0.28	0.108	U	0.284	1	0.16	0.263	U	0.801	1	0.46
E904.0	RA-228	RADIUM-228	PCI	1.64	U	2.81	3.1	1.3	-0.436	U	2.35	3.1	0.96	0.0491	U	2.32	3.1	0.96
E908	U-234	URANIUM-234	PCI	0.38	U	0.597	1	0.43	-0.049	U	1	1	0.28	0.377	U	0.81	1	0.49
	U-235	URANIUM-235	PCI	0	U	0.286	1	0.26	0.0489	U	0.772	1	0.26	-0.0472	U	0.666	1	0.068
	U-238	URANIUM-238	PCI	0.169	U	0.597	1	0.31	-0.0979	U	0.841	1	0.1	0.472	U	0.868	1	0.55
ISOTH	TH-228	THORIUM-228	PCI	-0.0219	U	0.263	1	0.044	0	U	0.182	1	0.16	0.37	J/9H	0.341	1	0.31
	TH-230	THORIUM-230	PCI	-0.0408	U	0.3	1	0.058	0.249	U	0.249	1	0.25	1.38	J/9H	0.143	1	0.58
	TH-232	THORIUM-232	PCI	0.0204	U	0.244	1	0.091	0.0623	U	0.169	1	0.13	0.37	J/9H	0.143	1	0.29

			Lab Sample	9HX81T	20				9HX81V	′ 10				9HX81V	30			
			Field Sample	P-0513					P-0514					P-0514				
			Collect Date	2/4/2006	3				2/4/2006	3				2/4/2006)			
			Type	N					N					N				
			Parent															
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI						9.09	J/T	4.93	20	4.5					
	BETA	BETA, GROSS	PCI						16.4		5.47	6	4.1					
E903.1	RA-226	RADIUM-226	PCI						0.141	U	0.489	1	0.27					
E904.0	RA-228	RADIUM-228	PCI						1.27	U	1.95	3.1	0.94					
E908	U-234	URANIUM-234	PCI						0.023	U	0.791	1	0.25					
	U-235	URANIUM-235	PCI						0.115	U	0.312	1	0.23					
	U-238	URANIUM-238	PCI						0.115	U	1.07	2	0.43					
ISOTH	TH-228	THORIUM-228	PCI	0.642	J/9H	0.158	1	0.4			I -			0.248	U	0.576	1	0.33
	TH-230	THORIUM-230	PCI	1.93	J/9H	0.145	1	0.73						0.829	UJ/2	0.829	1	0.46
	TH-232	THORIUM-232	PCI	0.482	J/9H	0.145	1	0.33						0.829 UJ/2 0.829 1 0	0.2			

Report Generated: Wednesday, June 14, 2006

Page: 5 of 6

Units		Result	Qual / Reason	MDL	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
Parent							P-0510				
Type		N					FD				
Collec	t Date	2/4/2006	}				2/4/2006	6			
Field S	Sample	P-0515					P-0516				
Lab Sa	ample	9HX81V	/10				9HX81X	10			

									l				
Method	CAS Number	Chemical Name	Units	Result	Qual / Reason	MDL.	RDL	Uncert	Result	Qual / Reason	MDL	RDL	Uncert
E900.0	ALPHA	ALPHA, GROSS	PCI	6.53	J/T	5.94	20	4.2	2.92	U	5.96	20	3.3
	BETA	BETA, GROSS	PCI	13.8		5.06	6	4	13.3		5.92	6	4
E903.1	RA-226	RADIUM-226	PCI	2.36		0.71	1	0.78	-0.118	U	0.574	1	0.27
E904.0	RA-228	RADIUM-228	PCI	18.9		2.54	3.1	3.1	1.84	J/T	1.65	3.1	0.92
E908	U-234	URANIUM-234	PCI	0	U	0.323	1	0.29	0	U	0.268	1	0.24
	U-235	URANIUM-235	PCI	0	U	0.323	1	0.29	0	U	0.268	1	0.24
	U-238	URANIUM-238	PCI	0.0953	U	0.571	1	0.24	-0.0198	U	0.474	1	0.04
ISOTH	TH-228	THORIUM-228	PCI	-0.0222	U	0.266	1	0.044	0	U	0.147	1	0.13
	TH-230	THORIUM-230	PCI	0.144	U	0.247	1	0.17	0.101	U	0.137	1	0.14
	TH-232	THORIUM-232	PCI	-0.0206	U	0.247	1	0.041	0	U	0.137	1	0.12

Report Generated: Wednesday, June 14, 2006 Page: 6 of 6



Analytical Data Package Prepared For

Brown and Caldwell

Yerington Air Quality - Event #63

Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: STLR

Data Package Contains _____ Pages

Report No.: 32013

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
31025	EVENT 63	000357	J6B270158-9	HX8121AG	9HX81210	6060317
		000357	J6B270158-9	HX8121AA	9HX81210	6060336
		000357	J6B270158-9	HX8121AE	9HX81210	6060337
		000357	J6B270158-9	HX8121AF	9HX81210	6060339
		000357	J6B270158-9	HX8121AC	9HX81210	6060342
		000357	J6B270158-9	HX8121AD	9HX81210	6060344
		000358	J6B270158-10	HX8131AG	9HX81310	6060317
		000358	J6B270158-10	HX8131AA	9HX81310	6060336
		000358	J6B270158-10	HX8131AE	9HX81310	6060337
		000358	J6B270158-10	HX8131AF	9HX81310	6060339
		000358	J6B270158-10	HX8131AC	9HX81310	6060342
		000358	J6B270158-10	HX8131AD	9HX81310	6060344
	EVENT 63	000359	J6B270158-11	HX8141AG	9HX81410	6060317
		000359	J6B270158-11	HX8141AA	9HX81410	6060336
		000359	J6B270158-11	HX8141AE	9HX81410	6060337
		000359	J6B270158-11	HX8141AF	9HX81410	6060339
		000359	J6B270158-11	HX8141AC	9HX81410	6060342
		000359	J6B270158-11	HX8141AD	9HX81410	6060344
		000360	J6B270158-12	HX8151AG	9HX81510	6060317
		000360	J6B270158-12	HX8151AA	9HX81510	6060336
		000360	J6B270158-12	HX8151AE	9HX81510	6060337
		000360	J6B270158-12	HX8151AF	9HX81510	6060339
		000360	J6B270158-12	HX8151AC	9HX81510	6060342
		000360	J6B270158-12	HX8151AD	9HX81510	6060344
		000361	J6B270158-13	HX8161AG	9HX81610	6060317
		000361	J6B270158-13	HX8161AA	9HX81610	6060336

Report No.: 32013

SDG No.	Order No.	Client Sample ID (List Order)		Work Order	Report DB ID	Batch
31025	EVENT 63		J6B270158-13	HX8161AE	9HX81610	606033
			J6B270158-13	HX8161AF	9HX81610	606033
			J6B270158-13	HX8161AC	9HX81610	606034
			J6B270158-13	HX8161AD	9HX81610	606034
		000362	J6B270158-14	HX8171AG	9HX81710	606031
		000362	J6B270158-14	HX8171AA	9HX81710	606033
		000362	J6B270158-14	HX8171AE	9HX81710	606033
		000362	J6B270158-14	HX8171AF	9HX81710	606033
		000362	J6B270158-14	HX8171AC	9HX81710	606034
		000362	J6B270158-14	HX8171AD	9HX81710	606034
		000363	J6B270158-15	HX8181AG	9HX81810	606031
		000363	J6B270158-15	HX8181AA	9HX81810	606033
		000363	J6B270158-15	HX8181AE	9HX81810	606033
		000363	J6B270158-15	HX8181AF	9HX81810	606033
		000363	J6B270158-15	HX8181AC	9HX81810	606034
		000363	J6B270158-15	HX8181AD	9HX81810	606034
		P 0510	J6B270158-1	HX81N1AG	9HX81N10	606031
		P 0510	J6B270158-1	HX81N1AA	9HX81N10	606033
		P 0510	J6B270158-1	HX81N1AE	9HX81N10	606033
		P 0510	J6B270158-1	HX81N1AF	9HX81N10	606033
		P 0510	J6B270158-1	HX81N1AC	9HX81N10	606034
		P 0510	J6B270158-1	HX81N1AD	9HX81N10	606034
		P 0511	J6B270158-2	HX81Q1AG	9HX81Q10	606031
		P 0511	J6B270158-2	HX81Q1AA	9HX81Q10	606033
		P 0511	J6B270158-2	HX81Q1AE	9HX81Q10	606033
		P 0511	J6B270158-2	HX81Q1AF	9HX81Q10	606033
		P 0511	J6B270158-2	HX81Q1AC	9HX81Q10	606034
		P 0511	J6B270158-2	HX81Q1AD	9HX81Q10	606034
		P 0512	J6B270158-3	HX81R1AG	9HX81R10	606031
		P 0512	J6B270158-3	HX81R1AA	9HX81R10	606033
			J6B270158-3	HX81R1AE	9HX81R10	606033
			J6B270158-3	HX81R1AF	9HX81R10	606033
			J6B270158-3	HX81R1AC	9HX81R10	606034
			J6B270158-3	HX81R1AD	9HX81R10	606034
			J6B270158-4	HX81T1AG	9HX81T10	606031
			J6B270158-4	HX81T1AA	9HX81T10	606033
			J6B270158-4	HX81T1AE	9HX81T10	606033
			J6B270158-4	HX81T1AF	9HX81T10	606033
			J6B270158-4	HX81T1AC	9HX81T10	606034

Report No.: 32013

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
31025	EVENT 63	P 0513	J6B270158-4	HX81T1AD	9HX81T10	6060344
		P 0513	J6 B2 70158-4	HX81T2AA	9HX81T20	6115380
		P 0514	J6B270158-5	HX81V1AG	9HX81V10	6060317
		P 0514	J6B270158-5	HX81V1AE	9HX81V10	6060337
		P 0514	J6B270158-5	HX81V1AF	9HX81V10	6060339
		P 0514	J6B270158-5	HX81V1AC	9HX81V10	6060342
		P 0514	J6B270158-5	HX81V1AD	9HX81V10	6060344
		P 0514	J6B270158-5	HX81V3AA	9HX81V30	6110472
		P 0515	J6B270158-6	HX81W1AG	9HX81W10	6060317
		P 0515	J6B270158-6	HX81W1AA	9HX81W10	6060336
		P 0515	J6B270158-6	HX81W1AE	9HX81W10	6060337
		P 0515	J6B270158-6	HX81W1AF	9HX81W10	6060339
		P 0515	J6B270158-6	HX81W1AC	9HX81W10	6060342
		P 0515	J6B270158-6	HX81W1AD	9HX81W10	6060344
		P 0516	J6B270158-7	HX81X1AG	9HX81X10	6060317
		P 0516	J6B270158-7	HX81X1AA	9HX81X10	6060336
		P 0516	J6B270158-7	HX81X1AE	9HX81X10	6060337
		P 0516	J6B270158-7	HX81X1AF	9HX81X10	6060339
		P 0516	J6B270158-7	HX81X1AC	9HX81X10	6060342
		P 0516	J6B270158-7	HX81X1AD	9HX81X10	6060344
		P 0517	J6B270158-8	HX8111AG	9HX81110	6060317
		P 0517	J6B270158-8	HX8111AA	9HX81110	6060336
		P 0517	J6B270158-8	HX8111AE	9HX81110	6060337
		P 0517	J6B270158-8	HX8111AF	9HX81110	6060339
		P 0517	J6B270158-8	HX8111AC	9HX81110	6060342
		P 0517	J6B270158-8	HX8111AD	9HX81110	6060344



Certificate of Analysis

April 28, 2006

Brown & Caldwell 2701 Prospect Park Drive Rancho Cordova, CA 95670

Attention: Guy Graening

STL Richland 2800 George Washington Way Richland, WA 99352

Tel: 509 375 3131 Fax: 509 375 5590

www.stl-inc.com

Date Received at Lab

March 8, 2006

Project Name

Air Quality Monitoring Yerington Mine

Project Number

121243

Event Number

63

PO Number

129682.001

Sample Type

Fifteen (15) Filters

SDG Number : 31025

CASE NARRATIVE

I. Introduction

On March 8, 2006, fifteen filter samples were received at the STL Richland (STLR) laboratory for radiochemical analysis. Upon receipt, the samples were assigned the STLR identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J6B270158.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The analysis requested was:

Alpha Spectroscopy

Thorium-228, -230, -232 by method RICH-RC-5087 Uranium-234, -235, -238 by method RICH-RC-5067

Gas Proportional Counters

Gross Alpha by method STL-RICHRC5016/5014 Gross Beta by method STL-RICHRC5016/5014 Radium-228 by method STL RICH-RC-5005

Alpha Scintillation Counter

Radium-226 by method STL RICH-RC-5005

IV. **Quality Control**

The analytical result for each analysis performed includes a minimum of one laboratory control sample V. Comments

Thorium-228, -230, -232: 7 Sample P. 0513 by mistake.

Sample P-0514 had a high mistake.

Sample P-0514 had a high mistake. (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments"

6110472. In batch 6110472 the wrong sample was reanalyzed. Sample P-0514 was reanalyzed in batch 6115380. The yields for this batch are slightly over 115%. The LCS has a 108% recovery. Data is accepted. Except as noted, the LCS, batch blank and sample results are within analytical requirements.

Uranium-234, -235, -238:

The LCS, batch blank and sample results are within analytical requirements.

Gross Alpha Analysis:

The LCS, batch blank and sample results are within analytical requirements.

Gross Beta Analysis:

On the initial analysis the LCS had a very low recovery of 71%. The batch was reanalyzed with a 79% recovery. Data is accepted. Except as noted, the LCS, batch blank and sample results are within acceptance limits.

Radium-228 Analysis:

The LCS, batch blank and sample results are within analytical requirements.

Radium-226 Analysis:

The LCS, batch blank and sample results are within analytical requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Strong a Cliken Sherryl A. Adam Project Manager

Drinking Water Method Cross References

	DRINKING WAT	ER ASTM METHOD CROSS REFERENCES
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-2		
The Gross Beta LCS is prepared with Sr/Y-9	0 (unless otherwise	e specified in the case narrative)

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

BRC

CHAIN OF CUSTODY RECORD

COC	No.

☐ 3264 Goni Road / Suite 153 Carson City, NV 89706 03 20 06 775-883-4118/FAX 775-883-5108

☐ 4425 W. Spring Mountain Road / Suite 225 Las Vegas, NV 89102 702-938-4080 / FAX 702-938-4082

☐ 201 East Washington Street / Suite 500 (1) (1999) (2) Phoenix, AZ 85004 602-567-4000 / FAX 602-567-4001

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7	PROJEC	T NUMBER: 13	743																		
	1/6	OF THE I	- N	115 €	50 F1	LIEN	رندا ب	15 UTIL	-125	FU	NTHE METALS AN	464310	<u>, SA</u>	MAM	FΛ	12	LUT	# 4	6 K	1401	190
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0)1	- 05/0	2/5	106	16.0	CHL	1	85.10 Puber	NUNE	.3	PM 10 Cross sinta/Seta, Th C34 255 3381 Merais(Cheut		i, ela 1363 <u>HX8</u> 7				وسع المسمع				
O)2	- 05/1		.		Ì	1.	&2.10 Fiber	ROME	Α,	234-10 (vens) Alphalisere Th (83) 245-249), Mendsylldert	(SENJARA SKI (SEN)	Hy 8	18), C 1 Q			02	<u> </u>			
o)3	2-05/2-			07:15		1	8x70 Falser	MANE	٤	PM (0,33ros) Alphiniseta, G. (284,275,238) Metaligi heri	1228 USU 833 USB)	HX 61				6. 2	6.			
o)4	P. 0513		4-	07:45		t	Said Piter	NONE	۸	PM 45, Citoss Albha Beta, Th (274, 285, 288) Metals; Char	(018.330) 751 List	1342262 HX6				6.3	43			
2 0					0815		1	3x10 Files	RUNE	.3	PW-10, Orest AlphaBera, Fa (234,235,238), MedistClient	(328-230-24) [abs]	Hy81				E. D	5_			
(06	P-0315			08:46		1	agl ATiber	NOME	. 1	Pht-16, Cross of paraBeta. To (714-1952/195), Vetals Circal	(138 037 (28) ((8))	+ 17 012 to 2 H	184.4 W			\$ ²	33			
C	07 -	P-151E			06.10		;	Sa L'I Fibes	\$905VIII	.1	Phil 16, Gross Alpha/Beta, Th (234,233,238) Alecais(Client		н Рыг226.2 Н У87				C.5	a E			ļ
C	08	6-35 JF	, ,	$\sqrt{1/2}$	06:15	1	Į.	Ex.10 Fiser	KONE	,	Fild-16, Cirosa Alphia/Beta, 16 (256, 255, 198) Metalsi Chem		9. 50a(226.2 HX8/				2	الم مالمين			
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CHAIN OF CUSTODY RECORD

COC	No.	

DISTRIBUTION: WHITE - PROJECT FILE . CANARY - LAB RECEIPT . PINK - DATA MANAGEMENT . GOLDENROD - FIELD

\simeq BI	RC	OWN AND CALI	DWELL				С	HAIN (OF C	STODY RECORD			(CO	C N	10			
L RICHLAND		7	Carso	Goni Road on City, NV 18 / FAX 7	√ 89706			☐ 4425 W. Spring Mountain Road / Suite 225 Las Vegas, NV 89102 702-938-4080 / FAX 702-938-4082 ☐ 201 East Washington Street / Suite 500-10 Phoenix, AZ 85004 602-567-4000 / FAX 602-567-4001								nda Pilipi	É);		
≥F	PRO	DJECT NAME: 5 2 4	ton sir Qav							LABORATORY NAME &	ADDRESS:	Sa 11 :	i v a frac	- 1	A 21.	4.77657 <i>8</i> 3	G 41.3.5	ale Miller	
5	PRO	JECT NUMBER: 133	14.7											.:		<u> </u>			
	1/	6 OF THE 6	=>cy05	to FI	LTEN	W	AS UTI	LÍZE	- C	ME WETRS	ANAL	· 2164	SKUA	IHE	-JU	12 LUTH	66	, 614	019
CN	į	SAMPLE - 1.D.	ļ · ·	ECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER- VATIVE	MATRIX CODE	ANAI	LYSES ESTED			FIELD FILTERED	OC - REO	uniffe.	SAMPLING	DEPTH (FT.) BEGIN END	PIE RELOINE (span)
0	1	000357	2/2/2/2	06:05	PM	Į.	Ex 10 Filier	NUNE	_P ,	TSP. Grass Alpha Sett. Th. 12 (2): 235,248). Vehis(Clear)		Ащ 216.1211, НХ 812				22. 5			
0:	2	100358		06:40	!	i	8x 14) Filter	SOME		TSR, (gross Alpha/Benn Tol/12 (204-215,128) Afetals(Client I		Ref. 126.228. HX & 13	1-			0.14			
0:	3	000354		OFX	7	1.	8x (O Pager	NUME	a	TSP, Gross o ipéa Bera, Tu lu (034.225.238), Meruh (Cheut 1		+ w 116,13n. HX 6 1				033			
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0	6	1000362.		03:45		ł	actorisher	n var		TSP, 1990. Alpha Metal Fin. 23 (234, 235, 258). Metals (Mient)	Roger Edition 1803	HX 8 /	7			1 44			
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Sample Check-in List

Date/Tir	ne Received: 02	2706 0800	•			
Client:_	BA	?∠SDG#: <u>3</u>	3/025	_NA []	SAF #:	NA,FI
Work O	rder Number: 70	8270158	Chain	of Custod	y #	
Shipping	g Container ID:		Air Bi	11 #		
1.	Custody Seals on s	hipping container in	tact?		NA[]	Yes [] No[]
2.	Custody Seals date	d and signed?			NA[]	Yes [] No[]
3.	Chain of Custody	record present?			•	Yes [] No []
4.	Cooler temperature	e:NA [/]	5.Vermic	ulite/packi	ng materials	is NA [] Wet [] Dry []
6.	Number of sample	s in shipping contain	ner: 33	2		
7.	Sample holding tir	nes exceeded?			NA [/]	Yes [] No []
8.	Samples have:tapecustody seal	is			azard labels ppropriate sa	mples labels
9.	Samples are:in good conbroken	dition		h	eaking ave air bubb or samples re	les equiring head space)
10.	Sample pH taken?	NA J PH	[<2 [] pH>	2[]	adjusted pl	H[]
11.	Sample Location, *For documentation	Sample Collector Li on only. No correcti	sted? * ve action ne	eded.		Yes[] Nox
12.	Were any anomali	ies identified in samp	ole receipt?			Ycs[] No[]
13.	Description of and	omalies (include sam	ple numbers	s):		
Sample	Custodian:	141		_Date:	02.	2706
Cli	ent Sample ID	Analysis Requeste	ed	Condit	ion	Comments/Action
Client la	nformed on	by		Person	contacted	
	action necessary; pro			`		
. ,				Date		
	, 12/05, Rev. 6					

Konstadina Vlahogiani

From: Konstadina Vlahogiani

Sent: Wednesday, June 14, 2006 10:40 PM

To: 'Jordan, Erika'

Subject: RE: Yerington Event 63

Erika,

I have another request for Event 63. For gross alpha/beta, the efficiency checks are included in the data package but the background checks are not included. Please provide the background checks.

Thanks.

Dina

----Original Message----

From: Jordan, Erika [mailto:EJordan@stl-inc.com] Sent: Wednesday, June 14, 2006 4:05 PM

To: Konstadina Vlahogiani **Subject:** RE: Yerington Event 63

And I was just going to email you and see if you had all of your questions answered. I must have read your mind.

I will check it out and get back to you. I should be able to get you the answer this week.

Thanks Erika

From: Konstadina Vlahogiani [mailto:dvlahogi@envstd.com]

Sent: Wednesday, June 14, 2006 7:27 AM

To: Jordan, Erika

Subject: Yerington Event 63

Erika,

According to the Alpha Spec, Ulso by ALP, Calculated Results Detailed Report (pg. 658), there are 7 counts for U-238 in sample HX8161AG and the calculated U-238 result for this sample is a detection (activity>MDA). This result is reported for U-238.

According to the Alpha Regions Report (pg. 752) for sample HX8161AG, there are 4 counts for U-238; that would make the U-238 result a non-detect.

Could you please check again the U-238 result in sample HX8161AG?

Thanks,

Dina

Confidentiality Notice: The information contained in this message is intended only for the use of the addressee, and may be confidential

and/or privileged. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

Konstadina Vlahogiani

From: Konstadina Vlahogiani

Sent: Friday, June 23, 2006 3:49 PM

To: 'Jordan, Erika'

Subject: RE: Yerington Event 63

Importance: High

Erika.

I cannot use what you sent me. This is data from 2005. The samples in Event 63 were analyzed in April 2006.

----Original Message-----

From: Jordan, Erika [mailto:EJordan@stl-inc.com]

Sent: Friday, June 23, 2006 2:46 PM

To: Konstadina Vlahogiani **Subject:** RE: Yerington Event 63

Dina,

Here you go.

Thank you. Erika

From: Konstadina Vlahogiani [mailto:dvlahogi@envstd.com]

Sent: Friday, June 23, 2006 7:04 AM

To: Jordan, Erika

Subject: RE: Yerington Event 63

Erika.

Can you send me the backgrounds for alpha and beta?

----Original Message-----

From: Jordan, Erika [mailto:EJordan@stl-inc.com]

Sent: Thursday, June 22, 2006 2:58 PM

To: Konstadina Vlahogiani

Subject: RE: Yerington Event 63

Dina,

Alright, I have your explanation.

If you look on page 719, you will notice next to that sample ID, under comments that it says "edit". This sample was hand edited. The hand edit page is 749 and is the correct count information.

Thank you

Erika

From: Konstadina Vlahogiani [mailto:dvlahogi@envstd.com]

Sent: Wednesday, June 14, 2006 7:27 AM

To: Jordan, Erika

Subject: Yerington Event 63

Erika,

According to the Alpha Spec, UIso by ALP, Calculated Results Detailed Report (pg. 658), there are 7 counts for U-238 in sample HX8161AG and the calculated U-238 result for this sample is a detection (activity>MDA). This result is reported for U-238.

According to the Alpha Regions Report (pg. 752) for sample HX8161AG, there are 4 counts for U-238; that would make the U-238 result a non-detect.

Could you please check again the U-238 result in sample HX8161AG?

Thanks,

Dina

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Sample Results Summary STL Richland STLR

Date: 28-Apr-06

Ordered by Client Sample ID, Batch No.

Report No.: 32013

SDG No: 31025

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual Units	Yield	MDC MDA R	ER2
000357	HX8121AG	U-234	0.376 +- 0.406	ND pCi/sample	111%	0.474	
		U-235	0.00000 +- 0.242	ND pCi/sample	111%	0.268	
		U-238	0.0791 +- 0.203	ND pCi/sample	111%	0.474	
000357	HX8121AA	TH-228	0.140 +- 0.163	ND pCi/sample	99%	0.126	
		TH-230	0.0433 +- 0.0868	ND pCi/sample	99%	0.117	
		TH-232	0.0433 +- 0.0868	ND pCi/sample	99%	0.117	
000357	HX8121AE	ALPHA	10.3 +- 4.89	= pCi/sample	100%	5.18	
000357	HX8121AF	BETA	17.6 +- 4.20	= pCi/sample	100%	5.21	
000357	HX8121AC	RA-226	-0.2400 +- 0.276	ND pCi/sample	94%	0.604	
000357	HX8121AD	RA-228	4.50 +- 1.74	= pCi/sample	57%	2.83	
000358	HX8131AG	U-234	-0.0183 +- 0.0368	ND pCi/sample	97%	0.438	
		U-235	-0.0366 +- 0.0524	ND pCi/sample	97%	0.517	
		U-238	-0.0183 +- 0.0368	ND pCi/sample	97%	0.438	
000358	HX8131AA	TH-228	0.0928 +- 0.174	ND pCi/sample	95%	0.342	
		TH-230	0.108 +- 0.157	ND pCi/sample	95%	0.259	
		TH-232	0.00000 +- 0.106	ND pCi/sample	95%	0.117	
000358	HX8131AE	ALPHA	4.17 +- 3.22	ND pCi/sample	100%	4.86	
000358	HX8131AF	BETA	16.3 +- 4.06	= pCi/sample	100%	5.34	
000358	HX8131AC	RA-226	0.269 + 0.218	ND pCi/sample	99%	0.308	
000358	HX8131AD	RA-228	1.82 +- 0.929	= pCi/sample	88%	1.64	
000359	HX8141AG	U-234	0.194 +- 0.277	ND pCi/sample	101%	0.262	
		U-235	-0.0194 +- 0.0390	ND pCi/sample	101%	0.464	
		U-238	0.0968 +- 0.195	ND pCi/sample	101%	0.262	
000359	HX8141AA	TH-228	0.0590 +- 0.236	ND pCi/sample	95%	0.549	
		TH-230	0.467 +- 0.341	= pCi/sample	95%	0.33	
		TH-232	0.00000 +- 0.135	ND pCi/sample	95%	0.149	
000359	HX8141AE	ALPHA	6.84 + 4.12	= pCi/sample	100%	5.45	
000359	HX8141AF	BETA	18.9 +- 5.01	= pCi/sample	100%	4.71	
000359	HX8141AC	RA-226	0.308 +- 0.292	ND pCi/sample	111%	0.456	
000359	HX8141AD	RA-228	2.26 +- 1.02	= pCi/sample	81%	1.74	

STL Richland rptSTLRchSaSum

V4.15.0 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

⁼ ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary STL Richland STLR

Date: 28-Apr-06

Ordered by Client Sample ID, Batch No.

Report No.: 32013

SDG No: 31025

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual Units	Yield	MOCIMDA	RER2
000360	HX8151AG	U-234	1.23 +- 0.744	= pCi/sample	110%	0.481	
		U-235	0.0655 +- 0.196	ND pCi/sample	110%	0.515	
		U-238	0.852 +- 0.607	= pCi/sample	110%	0.441	
000360	HX8151AA	TH-228	0.692 +- 0.371	= pCi/sample	95%	0.125	
		TH-230	3.17 +- 0.873	= pCi/sample	95%	0.206	
		TH-232	0.601 +- 0.333	= pCi/sample	95%	0.116	
000360	HX8151AE	ALPHA	16.9 +- 6.29	= pCi/sample	100%	5.1	
000360	HX8151AF	BETA	25.1 +- 5.04	= pCi/sample	100%	5.06	
000360	HX8151AC	RA-226	0.563 +- 0.373	= pCi/sample	104%	0.512	
000360	HX8151AD	RA-228	1.85 +- 0.948	= pCi/sample	82%	1.73	
000361	HX8161AG	U-234	0.828 +- 0.643	= pCi/sample	91%	0.616	
		U-235	0.00000 +- 0.267	ND pCi/sample	91%	0.295	
		U-238	0.745 +- 0.600	= pCi/sample	91%	0.498	
000361	HX8161AA	TH-228	0.561 + 0.387	= pCi/sample	98%	0.354	
		TH-230	2.20 +- 0.767	= pCi/sample	98%	0.149	
		TH-232	0.825 +- 0.443	= pCi/sample	98%	0.149	
000361	HX8161AE	ALPHA	9.36 +- 4.64	= pCi/sample	100%	4.97	
000361	HX8161AF	BETA	24.7 +- 5.06	= pCi/sample	100%	5.18	
000361	HX8161AC	RA-226	2.09 +- 0.663	= pCi/sample	114%	0.402	
000361	HX8161AD	RA-228	21.7 +- 3.27	= pCi/sample	101%	1.49	
000362	HX8171AG	U-234	2.00 +- 1.06	= pCi/sample	92%	0.605	
		U-235	-0.00906 +- 0.0182	ND pCi/sample	92%	0.456	
		U-238	0.0769 +- 0.230	ND pCi/sample	92%	0.605	
000362	HX8171AA	TH-228	0.192 +- 0.273	ND pCi/sample	94%	0.47	
		TH-230	0.119 +- 0.169	ND pCi/sample	94%	0.161	
		TH-232	0.0595 +- 0.119	ND pCi/sample	94%	0.161	
000362	HX8171AE	ALPHA	10.9 +- 5.01	= pCi/sample	100%	5.12	
000362	HX8171AF	BETA	24.1 +- 5.02	= pCi/sample	100%	5.29	
000362	HX8171AC	FIA-226	0.114 +- 0.215	ND pCi/sample	96%	0.387	
000362	HX8171AD	RA-228	-0.0378 +- 0.876	ND pCi/sample	69%	2.25	

STL Richland rptSTLRchSaSum RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary STL Richland STLR

Date: 28-Apr-06

Ordered by Client Sample ID, Batch No.

Report No.: 32013

SDG No: 31025

Client ID	Work Order Number	Parameter	Result + Uncertainty (2s)	Qual Units	Yield	MDC MDA	RER2
000363	HX8181AG	U-234	-0.00891 +- 0.0179	ND pCi/sample	93%	0.448	
		U-235	0.00000 +- 0.273	ND pCi/sample	93%	0.302	
		U-238	-0.00891 +- 0.0179	ND pCi/sample	93%	0.448	
000363	HX8181AA	TH-228	0.0511 +- 0.103	ND pCi/sample	90%	0.139	
		TH-230	0.00000 +- 0.116	ND pCi/sample	90%	0.129	
		TH-232	0.00000 +- 0.116	ND pCi/sample	90%	0.129	
000363	HX8181AE	ALPHA	-0.8620 +- 1.56	ND pCi/sample	100%	4.86	
000363	HX8181AF	BETA	-1.2900 +- 2.44	ND pCi/sample	100%	5.36	
000363	HX8181AC	FA-226	0.112 +- 0.179	ND pCi/sample	105%	0,313	
000363	HX8181AD	RA-228	0.618 +- 0.752	ND pCi/sample	94%	1,66	
P 0510	HX81N1AG	U-234	0.0791 +- 0.203	ND pCi/sample	105%	0.474	
		U-235	-0.0198 +- 0.0399	ND pCi/sample	105%	0.474	
		U-238	0.00000 +- 0.242	ND pCi/sample	105%	0.268	
P 0510	HX81N1AA	TH-228	0.0452 +- 0.181	ND pCi/sample	98%	0.42	
,		TH-230	0.147 + 0.175	ND pCi/sample	98%	0.252	
		TH-232	0.00000 +- 0.103	ND pCi/sample	98%	0.114	
P 0510	HX81N1AE	ALPHA	2.11 +- 3.06	ND pCi/sample	100%	5.96	
P 0510	HX81N1AF	ВЕТА	13.2 +- 3.78	= pCi/sample	100%	5.41	
P 0510	HX81N1AC	FIA-226	0.264 +- 0.314	ND pCi/sample	99%	0.522	
P 0510	HX81N1AD	FA-228	0.752 +- 1.13	ND pCi/sample	88%	2.51	
P 0511	HX81Q1AG	U-234	0.380 +- 0.434	ND pCi/sample	95%	0.597	
1 0011		U-235	0.00000 +- 0.259	ND pCi/sample	95%	0.286	
		U-238	0.169 +- 0.307	ND pCi/sample	95%	0.597	
P 0511	HX81Q1AA	TH-228	-0.0219 +- 0.0439	ND pCi/sample	97%	0.263	
1 031,		TH-230	-0.0408 +- 0.0580	ND pCi/sample	97%	0.3	
		TH-232	0.0204 +- 0.0912	ND pCi/sample	97%	0.244	
P 0511	HX81Q1AE	ALPHA	2.92 +- 3.26	ND pCi/sample	100%	5.97	
P 0511	HX81Q1AF	BETA	11.5 +- 3.62	= pCi/sample	100%	5.03	
P 0511	HX81Q1AC	RA-226	-0.2270 +- 0.278	ND pCi/sample	91%	0.617	
P 0511	HX81Q1AD	RA-228	1.64 +- 1.34	ND pCi/sample	77%	2.81	

STL Richland rptSTLRchSaSum V4.15.0 A97

⁻ Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary STL Richland STLR

Ordered by Client Sample ID, Batch No.

Report No.: 32013

SDG No: 31025

Date: 28-Apr-06

Client ID	Work Order Number	Parameter	Result ← Uncertainty (2s)	Qual Units	Yield	MDCIMDA	RER2
P 0512	HX81R1AG	U-234	-0.0490 +- 0.277	ND pCi/sample	78%	1.0	
		U-235	0.0489 +- 0.259	ND pCi/sample	78%	0.772	
		U-238	-0.0979 +- 0.100	ND pCi/sample	78%	0.841	
P 0512	HX81R1AA	TH-228	0.00000 +- 0.164	ND pCi/sample	83%	0.182	
		TH-230	0.249 +- 0.252	ND pCi/sample	83%	0.169	
		TH-232	0.0623 +- 0.125	ND pCi/sample	83%	0.169	
P 0512	HX81R1AE	ALPHA	4.86 +- 3.56	ND pCi/sample	100%	5.25	
P 0512	HX81R1AF	BETA	13.3 +- 3.79	= pCi/sample	100%	5.53	
P 0512	HX81R1AC	RA-226	0.108 +- 0.165	ND pCi/sample	115%	0.284	
P 0512	HX81R1AD	RA-228	-0.4360 +- 0.957	ND pCi/sample	101%	2.35	
	HX81T1AG	U-234	0.377 +- 0.488	ND pCi/sample	82%	0.81	
P 0513	HAUTTIAU	U-235	-0.0472 +- 0.0675	ND pCi/sample	82%	0.666	
		U-238	0.472 +- 0.548	ND pCi/sample	82%	0.868	
P 0513	HX81T1AA	TH-228	0.370 +- 0.311	= pCi/sample	[143%]	0.341	.reark
1 0313	1,7,0	TH-230	1.38 +- 0.576	= pCi/sample	143%	0.143	
		TH-232	0.370 +- 0.285	= pCi/sample	143%	0.143	
P 0513	HX81T1AE	ALPHA	9.63 +- 4.91	= pCi/sample	100%	5.86	
P 0513	HX81T1AF	BETA	19.1 +- 4.45	= pCi/sample	100%	5.41	
P 0513	HX81T1AC	RA-226	0.263 +- 0.461	ND pCi/sample	98%	0.801	
P 0513	HX81T1AD	RA-228	0.0491 +- 0.964	ND pCi/sample	84%	2.32	
	HX81T2AA	TH-228	0.642 +- 0.404	= pCi/sample	(124%)	0.158	
P 0513	HAUTIZAR	TH-230	1.93 +- 0.730	= pCi/sample	124%	0.145	
		TH-232	0.482 + 0.333	= pCi/sample	124%	0.145	
D OCTA	HX81V1AG	U-23 4	0.0230 +- 0.248	ND pCi/sample	80%	0.791	
P 0514	11014171	U-235	0.115 +- 0.232	ND pCi/sample	80%	0.312	
		U-238	0.115 +- 0.425	ND pCi/sample	80%	1.07	
P 0514	HX81V1AE	ALPHA	9.09 +- 4.52	= pCi/sample	100%	4.93	
P 0514	HX81V1AF	BETA	16.4 +- 4.14	= pCi/sample	100%	5.47	
	HX81V1AC	RA-226	0.141 +- 0.273	ND pCi/sample	108%	0.489	
P 0514 P 0514	HX81V1AD	RA-228	1.27 +- 0.937	ND pCi/sample	97%	1.95	

STL Richland rptSTLRchSaSum V4.15.0 A97

⁻ Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA. RER2

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Sample Results Summary STL Richland STLR

Date: 28-Apr-06

Ordered by Client Sample ID, Batch No.

Report No.: 32013

SDG No: 31025

Client ID	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual Units	Yield	MDC MDA	RER2
P 0514	HX81V3AA	TH-228	0.248 + 0.330	ND pCi/sample	92%	0.576	
		TH-230	0.829 + 0.463	= pCi/sample	92%	0.343	
		TH-232	0.171 + 0.200	ND pCi/sample	92%	0.155	
P 0515	HX81W1AG	U-234	0.00000 +- 0.292	ND pCi/sample	83%	0.323	
		U-235	0.00000 +- 0.292	ND pCi/sample	83%	0.323	
		U-238	0.0953 +- 0.244	ND pCi/sample	83%	0.571	
P 0515	HX81W1AA	TH-228	-0.0222 +- 0.0444	ND pCi/sample	98%	0.266	
		TH-230	0.144 +- 0.171	ND pCi/sample	98%	0.247	
		TH-232	-0.0206 +- 0.0414	ND pCi/sample	98%	0.247	
P 0515	HX81W1AE	ALPHA	6.53 + 4.18	= pCi/sample	100%	5.94	
P 0515	HX81W1AF	BETA	13.8 +- 4.03	= pCi/sample	100%	5.06	
P 0515	HX81W1AC	RA-226	2.36 +- 0.784	= pCi/sample	93%	0.71	
P 0515	HX81W1AD	RA-228	18.9 +- 3.11	= pCi/sample	82%	2.54	
P 0516	HX81X1AG	U-234	0.00000 +- 0.243	ND pCi/sample	93%	0.268	
		U-235	0.00000 +- 0.243	ND pCi/sample	93%	0.268	
		U-238	-0.0198 +- 0.0398	ND pCi/sample	93%	0.474	
P 0516	HX81X1AA	TH-228	0.00000 +- 0.133	ND pCi/sample	99%	0.147	
		TH-230	0.101 +- 0.144	ND pCi/sample	99%	0.137	
		TH-232	0.00000 +- 0.124	ND pCi/sample	99%	0.137	
P 0516	HX81X1AE	ALPHA	2.92 +- 3.26	ND pCi/sample	100%	5.9 6	
P 0516	HX81X1AF	BETA	13.3 +- 3.98	= pCi/sample	100%	5.92	
P 0516	HX81X1AC	RA-226	-0.1180 +- 0.266	ND pCi/sample	102%	0.574	
P 0516	HX81X1AD	RA-228	1.84 +- 0.921	= pCi/sample	91%	1.65	
P 0517	HX8111AG	U-234	-0.0427 +- 0.0611	ND pCi/sample	92%	0.603	
		U-235	-0.0213 +- 0.0429	ND pCi/sample	92%	0.511	
		U-238	-0.0427 +- 0.0611	ND pCi/sample	92%	0.603	
P 0517	HX8111AA	TH-228	-0.0208 +- 0.0418	ND pCi/sample	95%	0.25	
		TH-230	0.116 + 0.135	ND pCi/sample	95%	0.105	
		TH-232	0.0194 +- 0.0868	ND pCi/sample	95%	0.233	
P 0517	HX8111AE	ALPHA	0.00995 +- 2.12	ND pCi/sample	100%	5.27	

STL Richland rptSTLRchSaSum

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

⁼ ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary STL Richland STLR

Ordered by Client Sample ID, Batch No.

chland STLR

Report No.: 32013

SDG No: 31025

Date: 28-Apr-06

Client ID	Work Order Number	Parameter	Result + Uncertainty (2s)	Qual Units	Yield	MDC MDA	RER2
P 0517	HX8111AF	BETA	1.51 +- 2.60	ND pCi/sample	100%	5.3	
P 0517	HX8111AC	RA-226	0.223 +- 0.195	ND pCi/sample	106%	0.277	
P 0517	HX8111AD	RA-228	1.60 +- 0.923	ND pCi/sample	94%	1.77	
Number of Results:	153						

STL Richland rptSTLRchSaSum V4.15.0 A97 RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

13

RADIOLOGICAL BLANK CONTAMINATION

NORMALIZED ABSOLUTE DIFFERENCE (NAD) LIMIT > 2.58

NAD = ABS (SAMPLE ACT - BLANK ACT) / SQRT [(TPU SAMPLE)2 + (TPU BLANK)2]

Event 63

Th-230 Method Blank

Sample No.	Sample Act	Sample TPU	Blank Act	Blank TPU	NAD	
P-0514	0.829	0.46	0.0175	0.0166	1.763	Flag UJ

RADIOLOGICAL FIELD DUPLICATE EVALUATION

REPLICATE ERROR RATIO (RER) LIMIT < 1.96

RER = ABS (SAMPLE ACT - DUPLICATE ACT) / SQRT [(TPU SAMPLE)2 + (TPU DUPLICATE)2]

Event 63

Samples: P-0510 & P-0516

Analyte	Sample Act	Sample TPU	Duplicate Act	Duplicate TPU	RER	Qualifier
alpha	13.2	3.8	13.3	4	0.018	
Ra-228	> 0.0791 (u	.) 0.2	1.84	0.92	1.870	
	MDA = 2.5					

QC Results Summary STL Richland STLR

Date: 28-Apr-06

Ordered by QC Type, Batch No.

Report No.: 32013

SDG No.: 31025

QC Type	Work Order Number	Parameter	Result +- Uncertainty (2s)	o	ual	Units	Yield	Recovery	Bias	MDC MDA
BLANK QC	H0EHT1AA	U-234	0.00000 +- 0.0165		N	pCi/sample	98%			0.0183
		U-235	-0.00269 +- 0.00385		Ν	pCi/sample	98%			0.038
		U-238	0.00000 +- 0.0165		Ν	pCi/sample	98%			0.0183
BLANK QC	H0EP81AA	TH-228	0.00399 +- 0.0126		N	pCi/sample	93%			0.0294
batch	6060336	TH-230	0.00928 +- 0.0134		N	pCi/sample	93%			0.0223
		TH-232	0.00000 +- 0.00909		N	pCi/sample	93%			0.0101
BLANK QC	H0EQF1AA	ALPHA	-0.0278 +- 0.0349		Ν	pCi/sample	100%			0.113
BLANK QC	H0EQR1AA	BETA	0.221 +- 0.216		Ν	pCi/sample	100%			0.423
BLANK QC	H0EQ51AA	RA-226	-0.0446 +- 0.0583		N	pCi/sample	112%			0.132
BLANK QC	H0ERC1AA	RA-228	0.0967 +- 0.187		N	pCi/sample	99%			0.431
BLANK QC	H3PLC1AA	TH-228	0.00000 +- 0.00971		N	pCi/sample	94%	associ with HX811	المعالى	0.0107
1	110472	(TH-230)	(0.0175 +- 0.0166)		=	pCi/sample	94%	W.771	AAE	0.0175
pater 0	• •	TH-232	0.00000 +- 0.00895		N	pCi/sample	94%	HX	$\lambda_{f}\lambda$	0.0099
BLANK QC	H31531AA	TH-228	0.00373 +- 0.00749		N	pCi/sample	122%			0.0101
batch	6115380	TH-230	0.00617 +- 0.00984		N	pCi/sample	122%			0.0164
		TH-232	0.00000 +- 0.00839		Ν	pCi/sample	122%			0.00928
LCS	H0EHT1AC	U-234	1.10 +- 0.316		=	pCi/sample	94%	110%	0.1	0.0576
		U-238	0.857 +- 0.259		=	pCi/sample	94%	82%	-0.2	0.0375
LCS	H0EP81AC	TH-230	1.90 +- 0.333		=	pCi/sample	92%	106%	0.1	0.0287
LCS	H0EQF1AC	ALPHA	2.33 +- 0.536		=	pCì/sample	100%	102%	0.0	0.106
LCS	H0EQR2AC	вета	3.56 +- 0.619		=	pCi/sample	100%	79%	-0.2	0.426
LCS	H0EQ51AC	RA-226	√ 1.40 +- 0.366		=	pCi/sample	100%	103%	0.0	0.138
LCS	H0ERC1AC	RA-228	√3.88 +- 0.658		=	pCi/sample	86%	76%	-0.2	0.442
LCS	H3PLC1AC	TH-230	1.67 +- 0.277		=	pCi/sample	92%	92%	-0.1	0.0209
LCS	H31531AC	TH-230	1.99 +- 0.363		=	pCi/sample	117%	108%	0.1	0.00756

Number of Results: 25

- (Result/Expected)-1 as defined by ANSI N13.30. STL Richland

= ERPIMS - Equal To, Analyte Detected rptSTLRchQcSum

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:05:00 AM

Lot-Sample No.: J6B270158-9

Report No.: 32013 **Received Date:**

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: 000357

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Parameter	Result	Quai	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er: HX8	121AG	Report DB ID	: 9HX81210							
U-234	0.376	ND	0.40	0.41	0.474	pCi/sample	111%	0.79	4/13/06 07:01 p	1.0	0.06163	E908.0
						0.103	1.0	(1.9)		Sample	Sample	ALP10
U-235	0.00000	ND	0.0000	0.24	0.268	pCi/sample	111%	0.	4/13/06 07:01 p	1,0	0.06163	E908.0
							1.0	O .		Sample	Sample	ALP10
U-238	0.0791	ND	0.20	0.20	0.474	pCi/sample	111%	0.17	4/13/06 07:01 p	1.0	0.06163	E908.0
						0.103	1.0	0.78		Sample	Sample	ALP10
<u>.</u>								Ratio U-234/	238 = 4.8			
Batch: 6060336	Work Ord	ler: HX8	B121AA	Report DB 10); 9HX81210							
TH-228	0.140	ND	0.16	0.16	0.126	pCi/sample	99%	(1.1)	4/12/06 08:39 p	1.0	0.08283	ISOTH
							1.0	(1,7)		Sample	Sample	ALP113
TH-230	0.0433	ND	0.087	0.087	0.117	pCi/sample	99%	0.37	4/12/06 08:39 p	1.0	0.08283	ISOTH
							1.0	1.		Sample	Sample	ALP113
TH-232	0.0433	ND	0.087	0.087	0.117	pCi/sample	99%	0.37	4/12/06 08:39 p	1.0	0.08283	ISOTH
							1.0	1.		Sample	Sample	ALP113
Batch: 6060337	Work Ord	ier: HX	8121AE	Report DB II	D: 9HX81210	·						
ALPHA	10.3	=	4.4	4.9	5.18	pCi/sample	100%	(2.)	4/7/06 08:42 a	1.0	0.0207	E900.0
						2.09	20.0	(4.2)		Sample	Sample	GPC10A
Batch: 6060339	Work Ord	der: HX	8121AF	Report DB II	D: 9HX81210							
BETA	17.6	=	3.5	4.2	5.21	pCi/sample	100%	(3.4)	4/5/06 10:15 a	1.0	0.08295	E900.0
						2.49	5.0	(8.4)		Sample	Sample	GPC26D
Batch: 6060342	Work Ore	der: HX	8121AC	Report DB I	D: 9HX81210)						

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:05:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-9

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000357

COC No.:

Matrix:

AIR

Yerington A	ir Quality - E	vent #6	3							Ordere	d by Client (Sample ID, Batch No.
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.2400	ND	0.27	0.28	0.604	pCi/sample 0.268	94% 1.0	-0.4 -(1.7)	4/10/06 03:21 p	0.833 Sample	0.24802 Sample	E903.1 ASCCSA
Batch: 6060344 RA-228	Work Ord 4.50	er: HX	3121AD 1.6	Report DB ID:	9HX81210 2.83	pCi/sample	57%	(1.6)	4/12/06 06:42 a	1.0	0.24802	E904.0
						1.22	3.1	(5.2)		Sample	Sample	GPC2C

Number of Results: 10

Comments:

Date: 28-Apr-06

GPC27A

Lab Name:

STL Richland

SDG:

31025

Sample

Sample

Collection Date: 2/5/2006 6:40:00 AM

Lot-Sample No.: J6B270158-10

Report No.: 32013 **Received Date:**

2/27/2006 8:00:00 AM

Client Sample ID: 000358

COC No.:

Matrix:

AIR

Verington A	ir Quality - Ev	vent #6	i3							Ordere	d by Client S	Sample ID, Batch N
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er: HX8	8131AG	Report DB II); 9HX81310							
U-234	-0.0183	ND	0.037	0.037	0.438	pCi/sample	97%	-0.04	4/13/06 07:01 p	1.0	0.06253	E908.0
						0.0951	1.0	-0.99		Sample	Sample	ALP11
U-235	-0.0366	ND	0.052	0.052	0.517	pCi/sample	97%	-0.07	4/13/06 07:01 p	1.0	0.06253	E908.0
0 200	-0,0000	110	4,	***	•	0.135	1.0	-(1.4)		Sample	Sample	ALP11
U-238	-0.0183	ND	0.037	0.037	0.438	pCi/sample	97%	-0.04	4/13/06 07:01 p	1.0	0.06253	E908.0
0-250	-0.0100	110	0.501			0.0951	1.0	-0.99		Sample	Sample	ALP11
								Ratio U-234/	238 = 1.0			
Batch: 6060336	Work Ord	er: HX	8131AA	Report DB II	D: 9HX81310							
TH-228	0.0928	ND	0.17	0.17	0.342	pCi/sample	95%	0.27	4/12/06 08:40 p	1.0	0.08393	ISOTH
						0.108	1.0	(1.1)		Sample	Sample	ALP114
TH-230	0.108	ND	0.16	0.16	0.259	pCi/sample	95%	0.42	4/12/06 08:40 p	1.0	0.08393	ISOTH
===	21100	, -,-				0.0711	1.0	(1.4)		Sample	Sample	ALP114
TH-232	0.00000	ND	0.0000	0.11	0.117	pCi/sample	95%	О.	4/12/06 08:40 p	1.0	0.08393	ISOTH
111 202	0.00000	,,,	0,000			•	1.0	Q .		Sample	Sample	ALP114
Batch: 6060337	Work Ord	ier: HX	(8131AE	Report DB I	ם: 9HX81310)						
ALPHA	4.17	ND	3.1	3.2	4.86	pCi/sample	100%	0.86	4/7/06 08:42 a	1.0	0.0208	E900.0
						1.94	20.0	(2.6)		Sample	Sample	GPC10B
Batch: 6060339	Work Ore	der: HX		Report DB I	ם: 9HX81310)						
BETA	16.3	=	3.4	4.1	5.34	pCi/sample	100%	(3.)	4/5/06 10:15 a	1.0	0.08367	E900.0
										Camala	0 1 -	

5.0

(8.)

STL Richland

V4.15.0 A97

Batch: 6060342

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

Report DB ID: 9HX81310

= ERPIMS - Equal To, Analyte Detected rptSTLRchSample

Work Order: HX8131AC

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

2.56

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:40:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-10

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000358

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No. Rst/MDC, **Total Sa** Analy Method, Count Tota! MDC|MDA, Rpt Unit, Yield Analysis, **Aliquot** Qual Error (2s) Uncert(2 s) **Action Lev** CRDL(RL) Rst/TotUcert Prep Date Size Size **Primary Detector** Parameter Result RA-226 0.269 ND 0.21 0.22 0.833 0.308 pCi/sample 99% 0.87 4/10/06 03:19 p 0.2505 E903.1 0.124 1.0 (2.5)Sample **ASCDUD** Sample Batch: 6060344 Work Order: HX8131AD Report DB ID: 9HX81310 RA-228 1.82 0.89 0.93 1.64 pCi/sample 88% 1.0 (1.1)4/12/06 06:42 a 0.2505 E904.0 0.69 3.1 (3.9)Sample GPC2D Sample

Number of Results: 10

Comments:

 $\frac{1}{\infty}$

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date:

2/5/2006 7:20:00 AM

Lot-Sample No.: J6B270158-11

32013 Report No.:

Received Date:

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: 000359

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Analy Method, Total Sa Aliquot Rst/MDC. MDCIMDA, Yield Analysis, Count Total Rpt Unit, **Primary Detector** CRDL(RL) Rst/TotUcert **Action Lev** Prep Date Size Size Result Qual Error (2s) Uncert(2s) Lc Parameter Work Order: HX8141AG Report DB ID: 9HX81410 Batch: 6060317 1.0 0.06217 E908.0 4/13/06 07:01 p U-234 0.194 ND 0.27 0.28 0.262 pCi/sample 101% 0.74 Sample ALP12 1.0 (1.4)Sample 1.0 E908.0 0.06217 ND 0.039 0.039 0.464 pCi/sample 101% -0.044/13/06 07:01 p U-235 -0.0194 -0.99 Sample Sample ALP12 0.101 1.0 101% 4/13/06 07:01 p 1.0 0.06217 E908.0 0.262 pCi/sample 0.37 U-238 0.0968 ND 0.19 0.19 Sample ALP12 1.0 0.99 Sample Ratio U-234/238 = 2.0 9 Report DB ID: 9HX81410 Batch: 6060336 Work Order: HX8141AA 1.0 ISOTH 0.24 0.549 pCi/sample 95% 0.11 4/12/06 08:40 p 0.08404 TH-228 0.24 ND 0.0590 Sample 0.5 Sample **ALP116** 0.194 1.0 1.0 0.08404 ISOTH 0.34 0.33 pCi/sample 95% (1.4)4/12/06 08:40 p TH-230 0.467 0.33 == Sample Sample **ALP116** 0.0904 (2.7)1.0 0. 4/12/06 08:40 p 1.0 0.08404 ISOTH 95% TH-232 0.00000 ND 0.0000 0.13 0.149 pCi/sample Sample **ALP116** 0. Sample 1.0 Batch: 6060337 Work Order: HX8141AE Report DB ID: 9HX81410 4/7/06 08:42 a 1.0 0.02079 E900.0 100% ALPHA 4.1 5.45 pCi/sample (1.3)6.84 3.9 (3.3)Sample Sample GPC10C 2.22 20.0 Batch: 6060339 Work Order: HX8141AF Report DB ID: 9HX81410 100% (4.)4/5/06 10:15 a 1.0 0.08318 E900.0 **BETA** 18.9 3.2 5.0 4.71 pCi/sample Sample Sample GPC27B 2.26 5.0 (7.5)Batch: 6060342 Work Order: HX8141AC Report DB ID: 9HX81410

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 7:20:00 AM

Lot-Sample No.: J6B270158-11

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Date: 28-Apr-06

Client Sample ID: 000359

COC No.:

Matrix:

AIR

Yerington A	ir Quality - E	vent #6	3							Ordere	d by Client S	Sample ID, Batch N
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
RA-226	0.308	ND	0.28	0.29	0.456	pCi/sample 0.198	111% 1.0	0.68 (2.1)	4/10/06 03:20 p	0.833 Sample	0.24976 Sample	E903.1 ASCEHA
atch: 6060344	Work Ord	ler: HX8	3141AD	Report DB II): 9HX81410							
RA-228	2.26	=	0.97	1.0	1.74	pCi/sample	81%	(1.3)	4/12/06 06:43 a	1,0	0.24976	E904.0
						0.736	3.1	(4.4)		Sample	Sample	GPC3A

Number of Results: 10

Comments:

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 7:50:00 AM

Lot-Sample No.: J6B270158-12

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000360

COC No.:

Matrix:

AIR

Yerington Ai	r Quality - E	vent #6	3							Ordere	d by Client S	Sample ID, Batch N
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Ord	er: HX8	3151AG	Report DB II	: 9HX81510							
U-234	1.23	=	0.70	0.74	0.481	pCi/sample 0.11	110% 1.0	(2.6) (3.3)	4/13/06 07:02 p	1.0 Sample	0.06237 Sample	E908.0 ALP69
U-235	0.0655	ND	0.20	0.20	0.515	pCi/sample 0.127	110% 1.0	0.13 0.67	4/13/06 07:02 p	1.0 Sample	0.06237 Sample	E908.0 ALP69
U-238	0.852	=	0.58	0.61	0.441	pCi/sample 0.0898	110% 1.0	(1.9) (2.8)	4/13/06 07:02 p	1.0 Sample	0.06237 Sample	E908.0 ALP69
<u>.</u>								Ratio U-234/	238 = 1.4			
Batch: 6060336	Work Orc	ler: HX8	3151 AA	Report DB II): 9HX81510							
TH-228	0.692	=	0.36	0.37	0.125	pCi/sample	95% 1.0	(5.5) (3.7)	4/12/06 08:40 p	1.0 Sample	0.08378 Sample	ISOTH ALP117
TH-230	3.17	=	0.74	0.87	0.206	pCi/sample 0.0446	95% 1.0	(15.4) (7.3)	4/12/06 08:40 p	1.0 Sample	0.08378 Sample	ISOTH ALP117
TH-232	0.601	=	0.32	0.33	0.116	pCi/sample	95% 1.0	(5.2) (3.6)	4/12/06 08:40 p	1,0 Sample	0.08378 Sample	ISOTH ALP117
Batch: 6060337	Work Ore	ier: HX8	8151AE	Report DB II) ; 9HX81510	l						
ALPHA	16. 9	=	5.3	6.3	5.1	pCi/sample 2.08	100% 20.0	(3.3) (5.4)	4/7/06 08:42 a	1.0 Sample	0.02093 Sample	E900.0 GPC10D
Batch: 6060339	Work Ore	der: HX	8151AF	Report DB II	D: 9HX81510	····						
BETA	25.1	=	3.7	5.0	5.06	pCi/sample 2.42	100% 5.0	(5.) (10.)	4/5/06 10:15 a	1.0 Sample	0.08357 Sample	E900.0 GPC27C
Batch: 6060342	Work Or	der: HX	8151AÇ	Report DB ii	D: 9HX81510)				W. CHITCHEN		

STL Richland rptSTLRchSample V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

32013

Collection Date: 2/5/2006 7:50:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-12

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000360

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID. Batch No.

TOTINGTOTE	in diading c	_ 0 10								0.0010		Sample IST Batelli ITT
Parameter	Result	Quai	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	0.563	==	0.35	0.37	0.512	pCi/sample 0.221	104% 1.0	(1.1) (3.)	4/10/06 03:21 p	0.833 Sample	0.25151 Sample	E903.1 ASCGSB
Batch: 6060344	Work Ord	der: HX	8151AD	Report DB II	p : 9HX81510							
RA-228	1.85	=	0.91	0.95	1.73	pCi/sample	82%	(1.1)	4/12/06 06:43 a	1.0	0.25151	E904.0
						0.739	3.1	(3.9)		Sample	Sample	GPC3B

Number of Results: 10

Comments:

Lab Name:

FORM I SAMPLE RESULTS

Date: 28-Apr-06

STL Richland

31025

SDG:

Collection Date: 2/5/2006 8:20:00 AM

Lot-Sample No.: J6B270158-13 Report No.:

lo.: 32013

Received Date: 2/27/2006 8:00:00 AM

Client Sample ID: 000361 COC No. :

Matrix: AIR

Ordered by Client Sample ID, Batch No. Yerington Air Quality - Event #63 Analy Method, Aliquot Total Sa Yield Rst/MDC. Analysis, MDC|MDA, Rpt Unit, Total Count **Primary Detector** CRDL(RL) Rst/TotUcert Size Size Prep Date Qual Error (2s) Uncert(2s) Action Lev Lc Result Parameter Work Order: HX8161AG Report DB ID: 9HX81610 Batch: 6060317 E908.0 4/13/06 07:02 p 1.0 0.06193 91% (1.3)0.616 pCi/sample 0.62 0.64 U-234 0.828 Sample Sample ALP71 0.16 1.0 (2.6)1.0 0.06193 E908.0 91% 0. 4/13/06 07:02 p 0.295 pCi/sample ND 0.0000 0.27 U-235 0.00000 ALP71 Sample 0. Sample 1.0 1.0 0.06193 E908.0 91% 4/13/06 07:02 p 0.60 0.498 pCi/sample (1.5)U-238 0.745 0.58 Sample Sample ALP71 (2.5)0.101 1.0 Ratio U-234/238 = 1.1 23 Work Order: HX8161AA Report DB ID: 9HX81610 Batch: 6060336 1.0 0.08285 ISOTH 4/12/06 08:40 p pCi/sample 98% (1.6)TH-228 0.38 0.39 0.354 0.561 Sample **ALP119** (2.9)Sample 0.0972 1.0 1.0 0.08285 ISOTH 98% (14.8)4/12/06 08:40 p pCi/sample 0.70 0.770.149TH-230 2.20 = Sample **ALP119** Sample 1.0 (5.7)ISOTH (5.5)4/12/06 08:40 p 1.0 0.08285 0.149 pCi/sample 98% 0.44 TH-232 0.825 0.43 Sample **ALP119** Sample (3.7)1.0 Report DB ID: 9HX81610 Work Order: HX8161AE Batch: 6060337 1.0 0.0209 E900.0 4/7/06 08:42 a 4.97 pCi/sample 100% (1.9)4.6 ALPHA 4.2 9.36 Sample Sample GPC10E (4.)1.98 20.0 Work Order: HX8161AF Report DB ID: 9HX81610 Batch: 6060339 1.0 E900.0 0.083 4/5/06 10:15 a 100% (4.8)5.1 5.18 pCi/sample BETA 3.7 24.7 GPC27D Sample Sample 2.48 5.0 (9.7)Batch: 6060342 Work Order: HX8161AC Report DB ID: 9HX81610

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

RchSample = ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 8:20:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-13

Report No.:

Received Date: 32013

2/27/2006 8:00:00 AM

Client Sample ID: 000361

COC No.:

Matrix:

AIR

Yerington A	ir Quality - E	vent #6	3							Ordere	d by Client S	Sample ID, Batch No
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	2.09	=	0.50	0.66	0.402	pCi/sample 0.167	114% 1.0	(5.2) (6.3)	4/10/06 03:19 p	0.833 Sample	0.2483 Sample	E903.1 ASCJSB
Batch: 6060344	Work Ord	ier: HX8			D: 9HX81610							
RA-228	21.7	=	2.1	3.3	1,49	pCi/sample 0.638	101% 3.1	(14.6) (13.2)	4/12/06 06:43 a	1.0 Sample	0.2483 Sample	E904.0 GPC3C

Number of Results: 10

Comments:

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

32013

Collection Date: 2/5/2006 8:45:00 AM

Lot-Sample No.: J6B270158-14

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000362

Yerington Air Quality - Event #63

COC No.:

Matrix:

Ordered by Client Sample ID, Batch No.

AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er: HX8	171AG	Report DB ID	; 9HX81710							
U-234	2.00	=	0.96	1.1	0.605	pCi/sample	92%	(3.3)	4/13/06 07:02 p	1.0	0.06232	E908.0
						0.149	1.0	(3.8)		Sample	Sample	ALP83
U-235	-0.00906	ND	0.018	0.018	0.456	pCi/sample	92%	-0.02	4/13/06 07:02 p	1,0	0.06232	E908.0
						0.0745	1.0	-0.99		Sample	Sample	ALP83
U-238	0.0769	ND	0.23	0.23	0.605	pCi/sample	92%	0.13	4/13/06 07:02 p	1.0	0.06232	E908.0
						0.149	1.0	0.67		Sample	Sample	ALP83
)—————————————————————————————————————								Ratio U-234/2	238 = 26.0			
Batch: 6060336	Work Ord	er: HX8	3171AA	Report DB II	: 9HX81710							
TH-228	0.192	ND	0.27	0.27	0.47	pCi/sample	94%	0.41	4/12/06 08:41 p	1.0	0.08311	ISOTH
						0.149	1.0	(1.4)		Sample	Sample	ALP120
TH-230	0.119	ND	0.17	0.17	0.161	pCi/sample	94%	0.74	4/12/06 08:41 p	1.0	0.08311	ISOTH
							1.0	(1.4)		Sample	Sample	ALP120
TH-232	0.0595	ND	0.12	0.12	0.161	pCi/sample	94%	0.37	4/12/06 08:41 p	1.0	0.08311	ISOTH
							1.0	1.		Sample	Sample	ALP120
Batch: 6060337	Work Ord	er: HX	8171AE	Report DB II): 9HX81710							
ALPHA	10.9	=	4.5	5.0	5.12	pCi/sample	100%	(2.1)	4/7/06 11:31 a	1.0	0.02095	E900.0
						2.07	20.0	(4.4)		Sample	Sample	GPC10A
Batch: 6060339	Work Ord	ler: HX	8171AF	Report DB II); 9HX81710)						
BETA	24.1	=	3.8	5.0	5.29	pCi/sample	100%	(4.6)	4/5/06 11:54 a	1.0	0.08384	E900.0
						2.53	5.0	(9.6)		Sample	Sample	GPC32A
Batch: 6060342	Work Orc	ier: HX	8171AC	Report DB I) : 9HX81710)		· · · · · · · · · · · · · · · · · · ·				

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 8:45:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-14

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: 000362

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

		•									
Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detecto
0.114	ND	0.21	0.22	0.387	pCi/sample 0.158	96% 1.0	0.29 (1.1)	•	0.833 Sample	0.24927 Sample	E903.1 ASCKMD
Work Ord	er: HX8	3171AD	Report DB ID): 9HX81710							
-0.0378	ND	0.88	0.88	2.25	pCi/sample	69%	-0.02	4/12/06 06:43 a	1.0	0.24927	E904.0
					0.969	3.1	-0.09		Sample	Sample	GPC3D
	Result 0.114 Work Ord	Result Qual 0.114 ND Work Order: HX	Result Qual Error (2 s) 0.114 ND 0.21 Work Order: HX8171AD	Count Total Result Qual Error (2s) Uncert(2s) 0.114 ND 0.21 0.22 Work Order: HX8171AD Report DB ID	Count Total MDC MDA, Result Qual Error (2s) Uncert(2s) Action Lev 0.114 ND 0.21 0.22 0.387 Work Order: HX8171AD Report DB ID: 9HX81710	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc 0.114 ND 0.21 0.22 0.387 pCi/sample 0.158 Work Order: HX8171AD Report DB ID: 9HX81710 -0.0378 ND 0.88 0.88 2.25 pCi/sample	Result Qual Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) 0.114 ND 0.21 0.22 0.387 pCi/sample 96% 0.158 1.0 Work Order: HX8171AD Report DB ID: 9HX81710 -0.0378 ND 0.88 0.88 2.25 pCi/sample 69%	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert 0.114 ND 0.21 0.22 0.387 pCi/sample 96% 0.29 0.158 1.0 (1.1) Work Order: HX8171AD Report DB ID: 9HX81710 -0.0378 ND 0.88 0.88 2.25 pCi/sample 69% -0.02	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date 0.114 ND 0.21 0.22 0.387 pCi/sample 0.158 96% 0.29 4/10/06 03:19 p Work Order: HX8171AD Report DB ID: 9HX81710 -0.0378 ND 0.88 0.88 2.25 pCi/sample 69% -0.02 4/12/06 06:43 a	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date Total Sa Size 0.114 ND 0.21 0.22 0.387 pCi/sample 96% 0.29 4/10/06 03:19 p 0.833 Work Order: HX8171AD Report DB ID: 9HX81710 9HX81710 <td>Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date Total Sa Size Aliquot Size 0.114 ND 0.21 0.22 0.387 pCi/sample 96% 0.29 4/10/06 03:19 p 0.833 0.24927 Work Order: HX8171AD Report DB ID: 9HX81710 9HX81710 Sample 0.0378 ND 0.88 0.88 2.25 pCi/sample 69% -0.02 4/12/06 06:43 a 1.0 0.24927</td>	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date Total Sa Size Aliquot Size 0.114 ND 0.21 0.22 0.387 pCi/sample 96% 0.29 4/10/06 03:19 p 0.833 0.24927 Work Order: HX8171AD Report DB ID: 9HX81710 9HX81710 Sample 0.0378 ND 0.88 0.88 2.25 pCi/sample 69% -0.02 4/12/06 06:43 a 1.0 0.24927

Number of Results: 10

Comments:

V4,15.0 A97

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:45:00 AM

Lot-Sample No.: J6B270158-15

32013

Received Date:

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: 000363

Report No.: COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Count Total MDCIMDA, Rot Unit. Yield Rst/MDC. Total Sa Aliquot Analy Method, Analysis, CRDL(RL) Rst/TotUcert Parameter Result Qual Error (2s) Uncert(2s) Action Lev Lc Prep Date Size Size **Primary Detector** Work Order; HX8181AG Batch: 6060317 Report DB ID: 9HX81810 U-234 -0.00891 ND 0.018 0.018 0.448 pCi/sample 93% -0.024/13/06 07:02 p 1.0 0.06257 E908.0 0.0733 1.0 -0.99 Sample Sample ALP84 U-235 0.00000 ND 0.302 0.0000 0.27 pCi/sample 93% 0. 4/13/06 07:02 p 1.0 0.06257 E908.0 0. Sample 1.0 Sample ALP84 U-238 -0.00891 ND 0.018 0.018 0.448 pCi/sample 93% -0.024/13/06 07:02 p 1.0 0.06257 E908.0 0.0733 1.0 -0.99 Sample Sample ALP84 Ratio U-234/238 = 1.0 Batch: 6060336 Work Order: HX8181AA Report DB ID: 9HX81810 TH-228 0.0511 ND 0.10 0.10 0.139 pCi/sample 90% 0.37 4/13/06 10:42 a 1.0 0.08325 ISOTH 1. Sample 1.0 Sample **ALP113** TH-230 0.00000 ND 0.0000 0.12 0.129 pCi/sample 90% 0. 4/13/06 10:42 a 1.0 0.08325 ISOTH 0. 1.0 Sample Sample **ALP113** TH-232 0.00000 ND 0.0000 0.12 0.129 90% 0. pCi/sample 4/13/06 10:42 a 1.0 0.08325 ISOTH Sample 1.0 0. Sample **ALP113** Batch: 6060337 Work Order: HX8181AE Report DB ID: 9HX81810 ALPHA 4/7/06 11:31 a -0.8620 ND 1.5 1.6 4.86 pCi/sample 100% -0.181.0 0.02085 E900.0 1.94 20.0 -(1.1)Sample Sample GPC10B Batch: 6060339 Work Order: HX8181AF Report DB ID: 9HX81810 **BETA** -1.29002.4 5.36 pCi/sample 100% -0.244/5/06 11:54 a 1.0 ND 2.4 0.08447 E900.0 Sample 2.57 5.0 -(1.1)Sample GPC32B Batch: 6060342 Work Order: HX8181AC Report DB ID: 9HX81810

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:45:00 AM

Date: 28-Apr-06

E904.0

GPC4A

Lot-Sample No.: J6B270158-15

ND

0.75

0.75

1.66

Report No.:

32013

94%

0.37

(1.6)

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: 000363

COC No.:

pCi/sample

0.721

Matrix:

4/12/06 06:43 a

AIR

0.25094

Sample

1.0

Sample

Yerington Air Quality - Event #63

0.618

Ordered by Client Sample ID, Batch No. Analy Method, **Total Sa Aliquot** Rst/MDC, Count Total MDC|MDA, Rpt Unit, Yield Analysis, **Primary Detector** CRDL(RL) Rst/TotUcert Size Size Prep Date **Parameter** Result Qual Error (2s) Uncert(2s) **Action Lev** Lc 0.833 ND 0.36 4/10/06 03:14 p 0.25094 E903.1 RA-226 0.112 0.18 0.18 0.313 pCi/sample 105% 0.129 (1.2)Sample Sample **ASCLMB** 1.0 Work Order: HX8181AD Batch: 6060344 Report DB ID: 9HX81810

3.1

Number of Results: 10

Comments:

RA-228

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date:

2/5/2006 6:00:00 AM

Lot-Sample No.: J6B270158-1

Report No.: 32013 Received Date:

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: P 0510

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Aliquot Analy Method, Rst/MDC. Total Sa Analysis, MDCIMDA, Rpt Unit, Yield Count Total **Primary Detector** CRDL(RL) Rst/TotUcert Size **Prep Date** Size Uncert(2s) **Action Lev** Result Qual Error (2s) Parameter Batch: 6060317 Work Order: HX81N1AG Report DB ID: 9HX81N10 1.0 0.06215 E908.0 105% 0.17 4/13/06 06:58 p U-234 0.0791 ND 0.20 0.20 0.474pCi/sample Sample ALP1 Sample 0.103 1.0 0.78 1.0 0.06215 E908.0 4/13/06 06:58 p 0,040 0.474 pCi/sample 105% -0.04U-235 -0.0198 ND 0.040 -0.99 Sample Sample ALP1 0.103 1.0 1.0 105% 0. 4/13/06 06:58 p 0.06215 E908.0 0.268 pCi/sample ND 0.0000 0.24 U-238 0.00000 Sample Sample ALP1 1.0 O. 3 Batch: 6060336 Report DB ID: 9HX81N10 Work Order: HX81N1AA 1.0 ISOTH pCi/sample 98% 0.11 4/12/06 08:39 p 0.08281 0.18 0.42 TH-228 0.0452 ND 0.18 Sample **ALP171** 0.5 Sample 0.149 1.0 1.0 ISOTH 0.58 4/12/06 08:39 p 0.08281 TH-230 0.147 ND 0.17 0.17 0.252 pCi/sample 98% Sample Sample ALP171 0.0692 1.0 (1.7)1.0 0.08281 ISOTH 0. 4/12/06 08:39 p 0.10 0.114 pCi/sample 98% TH-232 0.00000 ND 0.0000 0. Sample Sample **ALP171** 1.0 Batch: 6060337 Work Order: HX81N1AE Report DB ID: 9HX81N10 4/6/06 06:03 p 1.0 0.02091 E900.0 100% 0.35 5.96 pCi/sample ALPHA 3.0 3.1 2.11 ND Sample GPC10C 2.48 20.0 (1.4)Sample Report DB ID: 9HX81N10 Batch: 6060339 Work Order: HX81N1AF (2.4)4/5/06 09:14 a 1.0 0.08278 E900.0 BETA 3.3 3.8 5.41 pCi/sample 100% 13.2 Sample Sample GPC31A (7.)2.59 5.0 Work Order: HX81N1AC Report DB ID: 9HX81N10 Batch: 6060342

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

32013

Collection Date:

2/5/2006 6:00:00 AM

Lot-Sample No.: J6B270158-1

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Date: 28-Apr-06

Client Sample ID: P 0510

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcerl	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	0.264	ND	0.31	0.31	0.522	pCi/sample 0.233	99% 1.0	0.5 (1.7)	4/10/06 02:53 p	0.833 Sample	0.25113 Sample	E903.1 ASC1RH
Batch: 6060344	Work Ord	ler: HX8	BINIAD	Report DB ID): 9HX81N10							
RA-228	0.752	ND	1.1	1,1	2.51	pCi/sample 1.14	88% 3.1	0.3 (1.3)	4/12/06 06:41 a	1.0 Sample	0.25111 Sample	E904.0 GPC7A

Number of Results: 10

Comments:

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:35:00 AM

Lot-Sample No.: J6B270158-2

32013 Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0511

COC No.:

Matrix:

AIR

Ordered by Client Sample ID, Batch No. Yerington Air Quality - Event #63 Analy Method, Aliquot Total Sa Rst/MDC. Analysis, Yield MDCIMDA, Rpt Unit, Total Count **Primary Detector** CRDL(RL) Rst/TotUcert Size Size Prep Date Action Lev Lc Uncert(2s) Result Qual Error (2s) Parameter Report DB ID: 9HX81Q10 Work Order: HX81Q1AG Batch: 6060317 0.06228 E908.0 1.0 4/13/06 06:59 p 95% 0.64pCi/sample 0.43 0.597 0.43 0.380 ND U-234 ALP2 Sample Sample (1.7)0.155 1.0 E908.0 1.0 0.06228 4/13/06 06:59 p 95% 0. pCi/sample 0.286 0.0000 0.26 ND U-235 0.00000 ALP2 Sample Sample 0. 1.0 E908.0 1.0 0.06228 95% 0.28 4/13/06 06:59 p pCi/sample 0.597 0.31 ND 0.30 0.169 U-238 Sample Sample ALP2 (1.1)0,155 1.0 Ratio U-234/238 = 2.3 Report DB ID: 9HX81Q10 Work Order: HX81Q1AA Batch: 6060336 1.0 0.08318 ISOTH 4/12/06 08:39 p 97% -0.080.263 pCi/sample 0.044 0.044 TH-228 ~0.0219 ND **ALP172** Sample Sample -1. 1.0 0.0721 ISOTH 1.0 0.08318 4/12/06 08:39 p -0.1497% 0.3 pCi/sample 0.058 ND 0.058 TH-230 -0.0408ALP172 Sample Sample -(1.4)0.0948 1.0 ISOTH 1.0 0.08318 4/12/06 08:39 p 0.08 97% 0.091 0.244 pCi/sample ND 0.091 0.0204 TH-232 **ALP172** Sample Sample 0.450.067 1.0 Report DB ID: 9HX81Q10 Work Order: HX81Q1AE Batch: 6060337 0.02082 E900.0 1.0 0.49 4/6/06 06:03 p 100% pCi/sample 3.3 5.97 3.2 ND ALPHA 2.92 GPC10D Sample Sample (1.8)2.52 20.0 Report DB ID: 9HX81Q10 Work Order: HX81Q1AF Batch: 6060339 0.08315 E900.0 1.0 4/5/06 09:14 a (2.3)pCi/sample 100% 3.6 5.03 BETA 11.5 3.0 GPC31B Sample Sample (6.4)2.41 5.0 Report DB ID: 9HX81Q10 Work Order: HX81Q1AC Batch: 6060342

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:35:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-2

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0511

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No.

s Guunty L											
Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
-0.2270	ND	0.27	0.28	0.617	pCi/sample 0.272	91% 1.0	-0.37 -(1.6)	4/10/06 02:51 p	0.833 Sample	0.25022 Sample	E903.1 ASC2RC
Work Ord	er: HX	B1Q1AD	Report DB II): 9HX81Q10							
1.64	ND	1.3	1.3	2.81	pCi/sample	77%	0.58	4/12/06 06:41 a	1.0	0.25022	E904.0
					1.28	3.1	(2.4)		Sample	Sample	GPC7B
	Result -0.2270 Work Ord	Result Qual -0.2270 ND Work Order: HX	Result Qual Error (2 s) -0.2270 ND 0.27 Work Order: HX81Q1AD	Count Total Result Qual Error (2 s) Uncert(2 s) -0.2270 ND 0.27 0.28 Work Order: HX81Q1AD Report DB ID	Count Total MDC MDA,	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc -0.2270 ND 0.27 0.28 0.617 pCi/sample 0.272 Work Order: HX81Q1AD Report DB ID: 9HX81Q10 1.64 ND 1.3 1.3 2.81 pCi/sample	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) -0.2270 ND 0.27 0.28 0.617 pCi/sample 91% -0.272 1.0 Work Order: HX81Q1AD Report DB ID: 9HX81Q10 1.64 ND 1.3 1.3 2.81 pCi/sample 77%	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert -0.2270 ND 0.27 0.28 0.617 pCi/sample 91% -0.37 0.272 1.0 -(1.6) Work Order: HX81Q1AD Report DB ID: 9HX81Q10 1.64 ND 1.3 1.3 2.81 pCi/sample 77% 0.58	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date -0.2270 ND 0.27 0.28 0.617 pCi/sample 91% -0.37 4/10/06 02:51 p Work Order: HX81Q1AD Report DB ID: 9HX81Q10 1.64 ND 1.3 1.3 2.81 pCi/sample 77% 0.58 4/12/06 06:41 a	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date Total Sa Size -0.2270 ND 0.27 0.28 0.617 pCi/sample 91% -0.37 4/10/06 02:51 p 0.833 Work Order: HX81Q1AD Report DB ID: 9HX81Q10 9HX81Q10 9HX81Q10 0.58 4/12/06 06:41 a 1.0 1.64 ND 1.3 1.3 2.81 pCi/sample 77% 0.58 4/12/06 06:41 a 1.0	Result Qual Count Error (2 s) Total Uncert(2 s) MDC MDA, Action Lev Rpt Unit, Lc Yield CRDL(RL) Rst/MDC, Rst/TotUcert Analysis, Prep Date Total Sa Size Aliquot Size -0.2270 ND 0.27 0.28 0.617 pCi/sample 91% -0.37 4/10/06 02:51 p 0.833 0.25022 0.272 1.0 -(1.6) Sample Sample Work Order: HX81Q1AD Report DB ID: 9HX81Q10 1.64 ND 1.3 1.3 2.81 pCi/sample 77% 0.58 4/12/06 06:41 a 1.0 0.25022

Number of Results: 10

Comments:

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 7:15:00 AM

Lot-Sample No.: J6B270158-3

Report No. :

32013

Received Date: 2/27/2006 8:00:00 AM

AIR

Client Sample ID: P 0512

COC No.:

Matrix:

Ordered by Client Sample ID, Batch No.

Yerington Air	· Quality - Ev	vent #60	3							Ordere	d by Client S	iample ID, Batch N
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	r: HX8	1R1AG	Report DB ID): 9HX81R10							
U-234	-0.0490	ND	0.28	0.28	1.0	pCi/sample	78%	-0.05	4/13/06 06:59 p	1.0	0.06246	E908.0
						0.337	1.0	-0.35		Sample	Sample	ALP3
U-235	0.0489	ND	0.26	0.26	0.772	pCi/sample	78%	0.06	4/13/06 06:59 p	1.0	0.06246	E908.0
						0.221	1.0	0.38		Sample	Sample	ALP3
U-238	-0.0979	ND	0.098	0.10	0.841	pCi/sample	78%	-0.12	4/13/06 06:59 p	1.0	0.06246	E908.0
						0.255	1.0	-(2.)		Sample	Sample	ALP3
								Ratio U-234/	238 = 0 .5			
Batch: 6060336	Work Ord	er: HX8	BIR1AA	Report DB II): 9HX81R10	1				4.0		ISOTU
⊤H-228	0.00000	ND	0.0000	0.16	0.182	pCi/sample	83%	0.	4/12/06 08:39 p	1.0 Comple	0.08383	ISOTH ALP173
							1.0	0.		Sample	Sample	
TH-230	0.249	ND	0.25	0.25	0.169	pCi/sample	83%	(1.5)	4/12/06 08:39 p	1.0	0.08383	ISOTH
							1.0	(2.)		Sample	Sample	ALP173
TH-232	0.0623	ND	0.12	0.13	0.169	pCi/sample	83%	0.37	4/12/06 08:39 p	1.0	0.08383	ISOTH
							1.0	1.		Sample	Sample	ALP173
Batch: 6060337	Work Ord	er: HX		Report DB i	D: 9HX81R1)		-				
ALPHA	4.86	ND	3.4	3.6	5.25	pCi/sample	100%	0.93	4/6/06 06:03 p	1,0	0.02087	E900.0
, -						2.12	20.0	(2.7)		Sample	Sample	GPC10E
Batch: 6060339	Work Ore	ier: HX	81R1AF	Report DB	D: 9HX81R1	0						
BETA	13.3	=	3.3	3.8	5.53	pCi/sample	100%	(2.4)	4/5/06 09:14 a	1.0	0.08319	E900.0
						2.66	5.0	(7.)		Sample	Sample	GPC31C
Batch: 6060342	Work Ore	der: HX	81R1AC	Report DB	ID: 9HX81R1	0						

STL Richland

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected rptSTLRchSample

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025 32013 Collection Date: 2/5/2006 7:15:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-3

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0512

COC No. :

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
RA-226	0.108	ND	0.16	0.16	0.284	pCi/sample 0.113	115% 1.0	0.38 (1.3)	4/10/06 02:51 p	0.833 Sample	0.25079 Sample	E903.1 ASC3MA
Batch: 6060344	Work Ord	ler: HX8	31R1AD	Report DB II	 9: 9HX81R10			··				
RA-228	-0.4360	ND	0.96	0.96	2.35	pCi/sample 1.08	101% 3.1	-0.19 -0.91	4/12/06 06:41 a	1.0 Sample	0.25079 Sample	E904.0 GPC7C

Number of Results: 10

Comments:

V4,15,0 A97

Date: 28-Apr-06

31025

SDG: STL Richland

Report No.:

Collection Date: 2/5/2006 7:45:00 AM

Lot-Sample No.: J6B270158-4

32013

2/27/2006 8:00:00 AM **Received Date:**

Client Sample ID: P 0513

Lab Name:

COC No.:

ΑIR Matrix:

Ordered by Client Sample ID, Batch No.

Yerington Air	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Apt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er: HX8	31T1AG	Report DB ID:	9HX81T10		, ``,					F000 0
U-234	0.377	ND	0.48	0.49	0.81	pCi/sample	82%		4/13/06 06:59 p	1.0	0.06148	E908.0 ALP4
5 40 1						0.245	1.0	(1.5)		Sample	Sample	
U-235	-0.0472	ND	0.067	0.068	0.666	pCi/sample	82%	-0.07	4/13/06 06:59 p	1.0	0.06148	E908.0
0-233	-0.0472	110				0.173	1.0	-(1.4)		Sample	Sample	ALP4
U-238	0.472	ND	0.54	0.55	0.868	pCi/sample	82%	0.54	4/13/06 06:59 p	1.0	0.06148	E908.0
0-236	0.472	.,,	0.51			0.274	1.0	(1.7)		Sample	Sample	ALP4
					_ -			Ratio U-234/	238 = 0.8			
Batch: 6060336	Wark Ord	ler: HX	81T1AA	Report DB ID); 9HX81T10)				4.0	0.00400	ISOTH
TH-228	0.370	=	0.31	0.31	0.341	pCi/sample	143%		4/12/06 08:39 p	1.0 Sample	0.08199 Sample	ALP174
						0.0936	1.0	(2.4)		•	·	ISOTH
TH-230	1.38	=	0.54	0.58	0.143	pCi/sample	143%	(9.6)	4/12/06 08:39 p	1.0	0.08199	ALP174
							1.0	(4.8)		Sample	Sample	
TH-232	0.370	=	0.28	0.29	0.143	pCi/sample	143%	(2.6)	4/12/06 08:39 p	1.0	0.08199	ISOTH
(1) 202	0.570						1.0	(2.6)		Sample	Sample	ALP174
Batch: 6060337	Work Or	 der: H)	 (81T1AF	Report DB II	D: 9HX81T1	0						
ALPHA	9.63	=	4.5	4.9	5.86	pCi/sample	100%	(1.6)	4/6/06 08:46 p	1.0	0.02052	E900.0
ALCHA	5.03					2.43	20.0	(3.9)		Sample	Sample	GPC10A
Batch: 6060339	Work Or	der: H	X81T1AF	Report DB1	D: 9HX81T1	0						maa.
BETA	19.1	=	3.6	4.5	5.41	pCi/sample	100%	(3.5)	4/5/06 09:14 a	1.0	0.08204	E900.0
5=171	,0,1		•			2.59	5.0	(8.6)		Sample 	Sample	GPC32A
Batch: 6060342	Work O		X81T1AC	Report DB I	D : 9HX81T1	0						

STL Richland rptSTLRchSample V4,15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

ND Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

32013

Collection Date: 2/5/2006 7:45:00 AM

Lot-Sample No.: J6B270158-4

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0513

COC No.:

Matrix:

AIR

Ordered by Client Sample ID, Batch No. Yerington Air Quality - Event #63

-	Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
	FIA-226	0.263	ND	0.46	0.46	0.801	pCi/sample	98%	0.33	4/10/06 02:50 p	0.833	0.24625	E903.1
							0.369	1.0	(1.1)		Sample	Sample	ASC4HB
Bat	ch: 6060344	Work Ord	er: HX8	B1T1AD	Report DB II): 9HX81T10							
	RA-228	0.0491	ND	0.96	0.96	2.32	pCi/sample	84%	0.02	4/12/06 06:42 a	1.0	0.24626	E904.0
							1.05	3.1	0.1		Sample	Sample	GPC1A
Bat	ch: 6115380	Work Ord	ler: HX8	B1T2AA	Report DB II); 9HX81T20							
	TH-228	0.642	=	0.39	0.40	0.158	pCi/sample	124%	(4.1)	4/26/06 07:35 p	1.0	0.08224	ISOTH
36								1.0	(3.2)		Sample	Sample	ALP116
	TH-230	1.93	Ξ	0.64	0.73	0.145	pCi/sample	124%	(13.3)	4/26/06 07:35 p	1.0	0.08224	ISOTH
								1.0	(5.3)		Sample	Sample	ALP116
	TH-232	0.482	=	0.32	0.33	0.145	pCi/sample	124%	(3.3)	4/26/06 07:35 p	1.0	0.08224	ISOTH
								1.0	(2.9)		Sample	Sample	ALP116

Number of Results: 13

Comments:

Date: 28-Apr-06

STL Richland Lab Name:

SDG:

31025

32013

Collection Date: 2/5/2006 8:15:00 AM

Lot-Sample No.: J6B270158-5

Report No.:

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0514

COC No.:

Matrix:

AIR Ordered by Client Sample ID, Batch No.

Yerington Ai	r Quality - E	vent #6	3					5.4450	4 1	Total Sa	Aliquot	Analy Method,
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcerl	Analysis, Prep Date	Size	Size	Primary Detecto
Batch: 6060317	Work Ord	er: HX8	1V1AG	Report DB II): 9HX81V10	· · · · · ·						=000 B
U-234	0.0230	ND	0.25	0.25	0.791	pCi/sample	80%		4/13/06 06:59 p	1.0	0.0624	E908.0
						0.24	1.0	0.19		Sample	Sample	ALP5
U-235	0.115	ND	0.23	0.23	0.312	pCi/sample	80%	0.37	4/13/06 06:59 p	1.0	0.0624	E908.0
0 200	0						1.0	0.99		Sample	Sample	ALP5
U-238	0.115	ND	0.42	0.43	1.07	pCi/sample	80%	0.11	4/13/06 06:59 p	1.0	0.0624	E908.0
0-200	0,115	110	¥1.1 <u>-</u>			0.379	1.0	0.54		Sample	Sample	ALP5
								Ratio U-234/	238 = 0.2			
Batch: 6060337	Work Ord	der: HX	81V1AE	Report DB I	o: 9HX81V10)						F000 0
ALPHA	9.09	=	4.1	4.5	4.93	pCi/sample	100%	(1.8)	4/6/06 08:46 p	1.0	0.02086	E900.0 GPC10B
						1.98	20.0	(4.)		Sample 	Sample	GFCTOB
Batch: 6060339	Work Ore	der: HX	81V1AF	Report DB (D: 9HX81V10)						
BETA	16.4	=	3.5	4.1	5.47	pCi/sample	100%	(3.)	4/5/06 09:14 a	1.0	0.08311	E900.0
						2.63	5.0	(7.9)		Sample	Sample	GPC32B
Batch: 6060342	Work Or	HX		Report DB	D: 9HX81V1	0						
RA-226	0.141	ND	0.27	0.27	0.489	pCi/sample	108%	0.29	4/10/06 02:50 p	0.833	0.25149	E903.1
11/2 22.0	0.141	(10)	•			0.205	1.0	(1.)		Sample	Sample	ASC5SA
Batch: 6060344	Work Or	der H)		Report DB	: 9HX81V1	0						
RA-228	1.27	ND	0.91	0.94	1,95	pCi/sample	97%	0.65	4/12/06 06:42 a	1.0	0.25149	E904.0
MARKO	1.21	110	0.0.			0.877	3.1	(2.7)		Sample	Sample	GPC1C
			Z041/2 A A		ID: 9HX81V3	<u> </u>						
Batch: 6110472	Work O	raer: H	K81V3AA	Meport DB	D. MINUTES	~						

STL Richland rptSTLRchSample V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 8:15:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-5

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Ordered by Client Sample ID, Batch No.

Client Sample ID: P 0514

COC No.:

Matrix:

AIR

Verington Air Quality - Event #63

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
TH-228	0.248	ND	0.33	0.33	0.576	pCi/sample	92%	0.43	4/22/06 06:10 p	1.0	0.08363	ISOTH
						0.204	1.0	(1.5)		Sample	Sample	ALP116
TH-230	0.829	=	0.45	0.46	0.343	pCi/sample	92%	(2.4)	4/22/06 06:10 p	1.0	0.08363	ISOTH
, ,	, <u></u>					0.094	1.0	(3.6)		Sample	Sample	ALP116
TH-232	0.171	ND	0.20	0,20	0.155	pCi/sample	92%	(1.1)	4/22/06 06:10 p	1.0	0.08363	BOTH
	2.11						1.0	(1.7)		Sample	Sample	ALP116

Number of Results: 10

Comments:

Date: 28-Apr-06

ISOTH

ALP176

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 8:40:00 AM

Lot-Sample No.: J6B270158-6

Report No.: 32013 Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0515

COC No.:

Matrix:

AIR

1.0

Sample

0.08346

Sample

Yerington Air Quality - Event #63

-0.0206

Ordered by Client Sample ID, Batch No. Analy Method, **Total Sa** Aliquot Yield Rst/MDC, Analysis, Rpt Unit, Total MDCIMDA. Count **Primary Detector** CRDL(RL) Rst/TotUcert Size Size Prep Date **Action Lev** Error (2s) Uncert(2s) Lc Qual Parameter Result Batch: 6060317 Work Order: HX81W1AG Report DB ID: 9HX81W10 E908.0 0. 4/13/06 07:00 p 1.0 0.06252 0.29 0.323 pCi/sample 83% 0.0000 U-234 0.00000 ND Sample Sample ALP7 1.0 0. 1.0 0.06252 E908.0 0. 4/13/06 07:00 p 0.29 0.323 pCi/sample 83% U-235 0.00000 ND 0.0000 Sample Sample ALP7 0. 1.0 1.0 0.06252 E908.0 83% 0.17 4/13/06 07:00 p 0.24 0.571 pCi/sample 0.0953 ND 0.24 U-238 Sample Sample ALP7 0.124 1.0 0.78 39 Batch: 6060336 Report DB ID: 9HX81W10 Work Order: HX81W1AA ISOTH 1.0 0.08346 -0.08 4/12/06 08:39 p 98% 0.044 0.044 0.266 pCi/sample TH-228 -0.0222ND Sample Sample **ALP176** -1. 0.0729 1.0 1.0 0.08346 ISOTH 0.58 4/12/06 08:39 p 98% 0.17 0.247 pCi/sample TH-230 0.144 ND 0.17 ALP176 Sample Sample 0.0679 (1.7)1.0

-0.08

-1.

98%

1.0

4/12/06 08:39 p

Batch: 6060337	Work Ord	ier: HX8	1W1AE	Report DB I	D : 9HX81W1	10						
ALPHA	6.53	=	4.0	4.2	5.94	pCi/sample 2.47	100% 20.0	(1.1) (3.1)	4/6/06 08:46 p	1.0 Sample	0.02095 Sample	E900.0 GPC10C
Batch: 6060339	Work Order: HX81W1AF			Report DB ID: 9HX81W10								
BETA	13.8	=	3.2	4.0	5.06	pCi/sample	100%	(2.7)	4/5/06 09:14 a	1.0	0.08342	E900.0
						2,42	5.0	(6.9)		Sample	Sample	GPC32C

pCi/sample

0.0679

0.247

Report DB ID: 9HX81W10

0.041

STL Richland rptSTLRchSample

V4.15.0 A97

Batch: 6060342

TH-232

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

Work Order: HX81W1AC

ND

0.041

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date:

2/5/2006 8:40:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-6

Report No.: 32013 Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0515

COC No.:

Matrix:

AIR

Verington Air Quality - Event #63

Ordered by Client Sample ID, Batch No.

Temigron A	iii Quality L	TACHE HO	<u> </u>		_					——————————————————————————————————————		
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUceri	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	2.36	=	0.60	0.78	0.71	pCi/sample 0.324	93% 1.0	(3.3) (6.)	4/10/06 02:51 p	0.833 Sample	0.25101 Sample	E903.1 ASC8HB
Batch: 6060344	Work Ore	der: HX8	B1W1AD	Report DB ID); 9HX81W10)	-					
RA-228	18.9	=	2.2	3.1	2.54	pCi/sample	82%	(7.4)	4/12/06 06:42 a	1.0	0.25101	E904.0
						1.16	3.1	(12.1)		Sample	Sample	GPC1D

Number of Results: 10

Comments:

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:10:00 AM

Lot-Sample No.: J6B270158-7

Report No.: 32013

Received Date: 2/27/2006 8:00:00 AM

Client Sample ID: P 0516

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No. Analy Method. Total Ca

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er; HX8	1X1AG	Report DB ID	: 9HX81X10							
U-234	0.00000	ND	0.0000	0.24	0.268	pCi/sample	93%	О.	4/13/06 07:00 p	1.0	0.06237	E908.0
							1.0	О.		Sample	Sample	ALP8
U-235	0.00000	ND	0.0000	0.24	0.268	pCi/sample	93%	О.	4/13/06 07:00 p	1.0	0.06237	E908.0
							1.0	О.		Sample	Sample	ALP8
U-238	-0.0198	ND	0.040	0.040	0.474	pCi/sample	93%	-0.04	4/13/06 07:00 p	1.0	0.06237	E908.0
	0.0.00					0.103	1.0	-0.99		Sample	Sample	ALP8
Batch: 6060336	Work Ord	er: HX8	31X1AA	Report DB II): 9HX81X10							
TH-228	0.00000	ND	0.0000	0.13	0.147	pCi/sample	99%	О.	4/12/06 08:39 p	1.0	0.08341	ISOTH
							1.0	0.		Sample	Sample	ALP177
TH-230	0.101	ND	0.14	0.14	0.137	pCi/sample	99%	0.74	4/12/06 08:39 p	1.0	0.08341	ISOTH
							1.0	(1.4)		Sample	Sample	ALP177
TH-232	0.00000	ND	0.0000	0.12	0.137	pCi/sample	99%	0.	4/12/06 08:39 p	1.0	0.08341	ISOTH
	0.0000					•	1.0	0.		Sample	Sample	ALP177
Batch: 6060337	Work Ord	er: HX	81X1AE	Report DB II	o: 9HX81X10)						
ALPHA	2.92	ND	3.2	3.3	5.96	pCi/sample	100%	0.49	4/6/06 08:46 p	1.0	0.02083	E900.0
						2.51	20.0	(1.8)		Sample	Sample	GPC10D
Batch: 6060339	Work Orc	ier: HX	81X1AF	Report DB I	D: 9HX81X10)						
BETA	13.3	=	3.5	4.0	5.92	pCi/sample	100%	(2.2)	4/5/06 09:14 a	1.0	0.08372	E900.0
						2.85	5.0	(6.7)		Sample	Sample	GPC32D
Batch: 6060342	Work Ord	der: HX	81X1AC	Report DB t	D; 9HX81X10)						

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:10:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-7

Report No.:

32013

Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0516

COC No.:

Matrix:

AIR

Yerington Air Quality - Event #63

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC[MDA, Action Lev		Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	-0.1180	ND	0.27	0.27	0.574	pCi/sample 0.249	102% 1.0	-0.21 -0.89	4/10/06 02:50 p	0.833 Sample	0.25045 Sample	E903.1 ASC9RC
Batch: 6060344	Work Ord	er: HX	 B1X1AD	Report DB II): 9HX81X10				-			
RA-228	1.84	=	0.87	0.92	1.65	pCi/sample 0.696	91% 3.1	(1.1) (4.)	4/12/06 06:42 a	1.0 Sample	0.25045 Sample	E904.0 GPC2A

Number of Results: 10

Comments:

FORM I **SAMPLE RESULTS**

Date: 28-Apr-06

Lab Name:

STL Richland

SDG:

31025

Collection Date: 2/5/2006 6:15:00 AM

Lot-Sample No.: J6B270158-8

Report No.: 32013 Received Date:

2/27/2006 8:00:00 AM

Client Sample ID: P 0517

COC No.:

Matrix:

AIR

Ordered by Client Sample ID, Batch No. Yerington Air Quality - Event #63 Analy Method. Total Sa Aliquot Ref/MDC

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	er: HX8	111AG	Report DB ID	: 9HX81110							
U-234	-0.0427	ND	0.060	0.061	0.603	pCi/sample	92%	-0.07	4/13/06 07:01 p	1.0	0.06237	E908.0
						0.157	1.0	-(1.4)		Sample	Sample	ALP9
U-235	-0.0213	ND	0.043	0.043	0.511	pCi/sample	92%	-0.04	4/13/06 07:01 p	1.0	0.06237	E908.0
						0.111	1.0	-0.99		Sample	Sample	ALP9
U-238	-0.0427	ND	0.060	0.061	0.603	pCi/sample	92%	-0.07	4/13/06 07:01 p	1.0	0.06237	E908.0
3 200	0.0 /2/					0.157	1.0	-(1.4)		Sample	Sample	ALP9
								Ratio U-234/2	238 = 1.0			
Batch: 6060336	Work Ord	er: HX	3111AA	Report DB ID	: 9HX81110							
TH-228	-0.0208	ND	0.042	0.042	0.25	pCi/sample	95%	-0.08	4/12/06 08:39 p	1.0	0.08375	ISOTH
						0.0686	1.0	-1.		Sample	Sample	ALP178
TH-230	0,116	ND	0.13	0.14	0.105	pCi/sample	95%	(1.1)	4/12/06 08:39 p	1.0	0.08375	ISOTH
	*****						1.0	(1.7)		Sample	Sample	ALP178
TH-232	0.0194	ND	0.087	0.087	0.233	pCi/sample	95%	0.08	4/12/06 08:39 p	1.0	0.08375	ISOTH
111 202	0.0.04	.,,,				0.0638	1.0	0.45		Sample	Sample	ALP178
Batch: 6060337	Work Ord	 ler: HX	8111AE	Report DB II): 9HX81110)						
ALPHA	0.00995	ND	2.1	2.1	5.27	pCì/sample	100%	O.	4/6/06 08:46 p	1.0	0.02082	E900.0
	0.0000					2.13	20.0	0.01		Sample	Sample	GPC10E
Batch: 6060339	Work Ord	ier: HX	8111AF	Report DB II	D; 9HX81110)						
BETA	1.51	ND	2.6	2.6	5.3	pCi/sample	100%	0.29	4/5/06 10:15 a	1.0	0.08405	E900.0
						2.53	5.0	(1.2)		Sample	Sample	GPC26C
Batch: 6060342	Work Ore	der: HX	8111AC	Report DB I	D: 9HX8111)						

STL Richland rptSTLRchSample

V4.15.0 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

= ERPIMS - Equal To, Analyte Detected

ND Qual - Analyzed for but not detected above Ilmiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

SAMPLE RESULTS

Lab Name:

STL Richland

SDG:

31025 32013 Collection Date: 2/5/2006 6:15:00 AM

2/27/2006 8:00:00 AM

Date: 28-Apr-06

Lot-Sample No.: J6B270158-8

Report No.:

Received Date: Matrix:

AIR

Client Sample ID: P 0517

COC No.:

Ordered by Client Sample ID, Batch No.

Verinnton A	ir Quality - E	vent #6	3							Orgere	a by Client a	sample ID, batch iv
Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev		Yield CRDL(RL)	Rst/MDC, Rst/TotUcer	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
RA-226	0.223	ND	0.19	0.20	0.277	pCi/sample 0.108	106% 1.0	0.81 (2.3)	4/10/06 02:46 p	0.833 Sample	0.24931 Sample	E903.1 ASCBMA
Batch: 6060344 RA-228	Work Ore	ier: HX8		Report DB II	9HX81110 1.77	pCi/sample 0.766	94% 3.1	0.9 (3.5)	4/12/06 06:42 a	1.0 Sample	0.24931 Sample	E904.0 GPC2B

Number of Results:

Comments:

V4.15.0 A97

BLANK RESULTS

Lab Name:

STL Richland

Lot-Sample No.: J6C010000-317

SDG:

31025

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Orde	r: HOEH	IT1AA	Report DB ID:	H0EHT1AB							
U-234	0.00000	ND	0.0000	0.016	0.0183	pCi/sample	98%	Ο.	4/13/06 07:02 p	1.0	1.0	E908.0
0 204	0.0000					1.0		0.		Sample	Sample	ALP87
U-235	-0.00269	ND	0.0038	0.0038	0.038	pCi/sample	98%	-0.07	4/13/06 07:02 p	1.0	1.0	E908.0
0-235	-0,00203	NO	0.0000	5.5555	0.0099	1.0		-(1.4)		Sample	Sample	ALP87
		N.D.	0.0000	0.016	0.0030	pCi/sample	98%		4/13/06 07:02 p	1.0	1.0	E908.0
U-238	0.00000	ИD	0.0000	0.016	0.0163	1.0	3070	0.	,,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	Sample	Sample	ALP87

Number of Results: 3

BLANK RESULTS

Lab Name:

STL Richland

Lot-Sample No.: J6C010000-336

SDG:

31025

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUce		Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060336	Work Orde	r: HOEP	81AA	Report DB ID:	H0EP81AB					4.0	4.0	ICOTH
TH-228	0.00399	ND	0.013	0.013	0.0294	pCi/sample	93%	0.14	4/13/06 10:42 a	1.0	1.0	ISOTH
111-220	0,00000	,,,,			0.00928	1.0		0.63		Sample	Sample	ALP114
	0.0000	ND	0.013	0.013	0.0223	pCi/sample	93%	0.42	4/13/06 10:42 a	1.0	1.0	ISOTH
TH-230	0.00928	ND	0,013	0.010	0.0061	1.0		(1.4)		Sample	Sample	ALP114
			0.0000	0.0091	0.0001	pCi/sample	93%	0.	4/13/06 10:42 a	1.0	1.0	ISOTH
TH-232	0.00000	ND	0.0000	0.0091	0.0101	1.0	2070	0.		Sample	Sample	ALP114

Number of Results: 3

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-337

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060337	Work Orde	r: H0E0)F1AA	Report DB ID:	H0EQF1AB							
ALPHA	-0.0278	ND	0.034	0.035	0.113	pCi/sample	100%	-0.25	4/7/06 11:31 a	1.0	1.0	E900.0
					0.0462	20.0		-(1.6)		Sample	Sample	GPC10C

Number of Results: 1

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-339

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060339	Work Orde	r: H0E0	OR1AA	Report DB ID:	H0EQR1AB							
BETA	0.221	ND	0.21	0.22	0.423 0.202	pCi/sample 5.0	100%	0.52 (2.)	4/5/06 11:54 a	1.0 Sample	1.0 Sample	E900.0 GPC32C

Number of Results:

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-342

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Tota! Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUce		Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6060342	Work Orde	r; HOEC	251 A A	Report DB ID:	H0EQ51AB							
RA-226	-0.0446	ND	0.058	0.058	0.132	pCi/sample	112%	-0.34	4/10/06 03:19 p	1.0	1.0	E903.1
					0.0574	1.0		-(1.5)		Sample	Sample	ASCPMA

Number of Results: 1

Date: 28-Apr-06

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-344

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcer	Analysis, t Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 6060344	Work Orde	r: HOEF	RC1AA	Report DB ID:	H0ERC1AB							
RA-228	0.0967	ND	0.19	0.19	0.431	pCi/sample	99%	0.22	4/12/06 06:43 a	1.0	1.0	E904.0
					0.188	3.1		(1.)		Sample	Sample	GPC4B

Number of Results: 1

Comments:

V4.15.0 A97

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6D200000-472

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Resuit	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUce	•	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6110472	Work Orde	r: H3Pl	C1AA	Report DB ID:	H3PLC1AB							100TH
TH-228	0.00000	ND	0.0000	0.0097	0.0107	pCi/sample	94%	0.	4/22/06 06:11 p	1.0	1.0	ISOTH
11, 220	0.0000					1.0		0.		Sample	Sample	ALP117
	0.0475		0.016	0.017	0.0175	pCi/sample	94%	(1.)	4/22/06 06:11 p	1.0	1.0	ISOTH
TH-230	0.0175	=	0.016	0.017	0.0038	1.0	•	(2.1)		Sample	Sample	ALP117
		ND	0.0000	0.0089	0.0038	pCi/sample	94%	0.	4/22/06 06:11 p	1.0	1.0	ISOTH
TH-232	0.00000	ND	0.0000	0.0069	0.0033	1.0	3470	0.		Sample	Sample	ALP117

Number of Results: 3

Date: 28-Apr-06

BLANK RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6D250000-380

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 6115380	Work Orde	r: H315	31AA	Report DB ID:	H31531AB							ICOTU
TH-228	0.00373	ND	0.0075	0.0075	0.0101	pCi/sample	122%	0.37	4/26/06 07:35 p	1.0	1.0	ISOTH
11. 22.00	0,000.					1.0		1.		Sample	Sample	ALP117
T IL 800	0.00017	ND	0.0098	0.0098	0.0164	pCi/sample	122%	0.38	4/26/06 07:35 p	1.0	1.0	ISOTH
TH-230	0.00617	ND	0.0090	0.0000	0.00356	1.0		(1.3)		Sample	Sample	ALP117
				0.0004			122%	, ,	4/26/06 07:35 p	1.0	1.0	ISOTH
TH-232	0.00000	ND	0.0000	0.0084	0.00928	pCi/sample 1.0	122.70	0.	1,20,00 21 100 p	Sample	Sample	ALP117

Number of Results: 3

Ų

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

Lot-Sample No.: J6C010000-317

SDG:

31025

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6060317	Work Ore	ier: H0	EHT1AC	Report DB	ID: HOEHT	1CS							
U-234	1.10	=	0.20	0.32	0.0576	pCi/sample	93.78%	1.00	0.0058	110%	4/13/06 07:02 p	1.0	E908.0
0.204	1.10		5 5			Rec	Limits:			0.1		Sample	ALP85
U-238	0.857	=	0.18	0.26	0.0375	pCi/sample	93.78%	1.05	0.0061	82%	4/13/06 07:02 p	1.0	E908.0
0-236	0.007	_	0.10	0.20		'	: Limits:			-0.2		Sample	ALP85

Number of Results: 2

LCS RESULTS

Lab Name:

STL Richland

Lot-Sample No.: J6C010000-336

31025

Report No.: 32013

SDG:

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6060336	Work Ord	ler: H0	EP81AC	Report DB	ID: HOEP8	1CS							100TH
TH-230	1.90	=	0.19	0.33	0.0287	pCi/sample	92.18%	1.80	0.054	106%	4/13/06 10:42 a	1.0	ISOTH
						Rec	Limits:	70.	130.	0.1		Sample	ALP116

Number of Results: 1

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-337

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDCIMDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Allquot Size	Analy Method, Primary Detector
Batch: 6060337	Work Ord	der: HC	EQF1AC	Report DB	ID: HOEQF	1CS							
ALPHA	2.33	=	0.26	0.54	0.106	pCi/sample	100.00%	2.29	0.072	102%	4/7/06 11:31 a	1.0	E900.0
						Rec	: Limits:			0.0		Sample	GPC10D

Number of Results: 1

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-339

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDCIMDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6060339	Work Ore	der: HO	EQR2AC	Report DB	ID: HOEQF	2CS							
BETA	3.56	=	0.37	0.62	0.426	pCi/sample	100.00%	4.53	0.036	79%	4/6/06 12:21 p	1.0	E900.0
						Red	: Limits:			-0.2		Sample	GPC28B

Number of Results: 1

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-342

Report No.: 32013

Matrix: AIR

Date: 28-Apr-06

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6060342	Work Ord	der: HO	EQ51AC	Report DB	ID: HOEQ5	1CS							
RA-226	1.40	=	0.20	0.37	0.138	pCi/sample	100.35%	1.37	0.35	103%	4/10/06 03:44 p	1.0	E903.1
						Re	c Limits:	70.	130.	0.0		Sample	ASCOMO

Number of Results: 1

Comments:

V4.15.0 A97

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6C010000-344

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC[MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6060344	Work Ord	ier: H0	ERC1AC	Report DB	ID: HOERC	1CS							
RA-228	3.88	=	0.48	0.66	0.442	pCi/sample	86.06%	5.08	0.13	76%	4/12/06 07:54 a	1.0	E904.0
						Rec	Limits:	70.	130.	-0.2		Sample	GPC4C

Number of Results: 1

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6D200000-472

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Allquot Size	Analy Method, Primary Detector
Batch: 6110472	Work Ord	der: H3	BPLC1AC	Report DB	ID: H3PLC	1 C S							
TH-230	1.67	=	0.14	0.28	0.0209	pCi/sample	91.69%	1.83	0.055	92%	4/22/06 06:11 p	1.0	ISOTH
						Rec	Limits:	70.	130.	-0.1		Sample	ALP118

Number of Results: 1

Date: 28-Apr-06

LCS RESULTS

Lab Name:

STL Richland

SDG:

31025

Lot-Sample No.: J6D250000-380

Report No.: 32013

Matrix: AIR

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6115380	Work Ord	l e r: H3	1531AC	Report DB	ID: H31531	cs				···			
TH-230	1.99	=	0.15	0.36	0.00756	pCi/sample	117.44%	1.84	0.061	108%	4/26/06 07:35 p	1.0	ISOTH
						Red	c Limits:	70.	130.	0.1		Sample	ALP118

Number of Results: 1

ALPHA SAMPLE AND QC DATA

	·			
SEVERN STL	Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review	4/11/2006 11:	13:4	 16 AN
Lot No., Due Date:	J6B270158; 03/31/2006			
Client, Site:	536403; AIR MONITORING Yerington Mine			
QC Batch No., Method Tes	st: 6060337; RALPHA-A Alpha by GPC-Am			
SDG, Matrix:	31025; FILTER			
1.0 COC 1.1 Is the ICOC page complete	e; includes all applicable analysis, dates, SOP numbers, and revisions?	Yea	No	N/A
2.0 QC Batch 2.1 Do the Summary/Detailed I	Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2 Are the QC appropriate for	the analysis included in the batch?	Yes	No	N/A
2.3 Is the Analytical Batch Wor	rksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4 Does the Worksheets inclu	de a Tracer Vial label for each sample?	Yes	No	N/A
3.0 QC & Samples 3.1 Is the blank results, yield, a	and MDA within contract limits?	Yesi	No	N/A
3.2 is the LCS result, yield, and	d MDA within contract limits?	Yeşi	No	N/A
3.3 Are the MS/MSD results, yi	elds, and MDA within contract limits?	Yes	No	N/A
3.4 Are the duplicate result, yie	elds, and MDAs within contract limits?	Yes	No	N/A
3.5 Are the sample yields and l	MDAs within contract limits?	Yes	No	N/A
4.0 Raw Data 4.1 Were results calculated in t	the correct units?	Yeşr	No	N/A
4.2 Were analysis volumes ent	ered correctly?	₩ Yeş	No	N/A
4.3 Were Yields entered correct	otly?	Yes	No	N/A
4.4 Were spectra reviewed/med	et contractual requirements?	Yes	No	N/A
4.5 Were raw counts reviewed	for anomalies?	Yes	No	N/A
5.0 Other 5.1 Are all nonconformances in	cluded and noted?	Yes	No	N/A
5.2 Are all required forms filled	out?	Yeş	No	V N/A

5.2 Are all required forms filled out?

5.3 Was the correct methodology used?

5.4 Was transcription checked?

5.5 Were all calculations checked at a minimum frequency?

5.6 Are worksheet entries complete and correct?

6.0 Comments on any No response:

First Level Review

Pan anderson Date 4-11-06

Page 1

Yes No N/A Yes No N/A

Yes No N/A

Yes No N/A



Data Review Checklist RADIOCHEMISTRY Second Level Review

	6060337
OC Batch Number:	(000000

A. Sample Analysis 1. Are the sample yields within acceptance criteria? 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result enec the Contract criteria? 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria? 9. Do the duplicate sample results and yields meet acceptance criteria? C. Other 1. Are all Nonconformances included and noted? 2. Are all required forms filled out? 3. Was the correct methodology used? 4. Was transcription checked? 5. Were all calculations checked at a minimum frequency? 6. Were units checked?	Review Item	Yes (√)	No (1)	N/A (v)
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	Second Level Review: Therry a clean			4-11-0

4/4/2006 5:20:19 PM Sample Preparation/Analysis Balance Id:1120373922 536403, Brown and Caldwell . Brown & BA Gross Alpha PrpRC5016/5014 Pipet #: _ Caldwell S7 Gross Alpha by GPC using Am-241 curve 01 STANDARD TEST SET Sep1 DT/Tm Tech: Report Due: 03/31/2006 Batch: 6060337 PM, Quote: EJ, 63174 FILTER pCi/sampl Sep2 DT/Tm Tech: SEQ Batch, Test: None All Tests: 6060317 7YSR, 6060336 9NS1, 6060337 BAS7, 6060339 BDS8, 6060342 BXTE, 6060344 BXTF, Prep Tech: HansenM Work Order, Lot, Total Initial Aliquot QC Tracer Count On | Off Dish Ppt or Count Detector CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min id (24hr) Circle Init/Date Volume 1 HX81N-1-AE 0.833sa 12.64q.in 1000N J6B270158-1-SAMP 0.833 / 50356 /12.64 - 0.020 1918 02/05/2006 06:00 AmtRec: FOLDER #Containers: 1 Sor: Alpha: Beta: 2 HX81Q-1-AE 0.833sa 12.54q,in 100 J6B270158-2-SAMP AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 3 HX81R-1-AE 0.833sa 12.55g,in 1015 J6B270158-3-SAMP AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 4 HX81T-1-AE 0.833sa 12.53q.in IOA 7202 J6B270158-4-SAMP 02/05/2006 07:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 5 HX81V-1-AE 12.55g,in 0.833sa 100 J6B270158-5-SAMP 02/05/2006 08:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 6 HX81W-1-AE 0.833sa 12.59a.in 100 03 J6B270158-6-SAMP 02/05/2006 08:40 Scr: AmtRec: FOLDER #Containers: Alpha: Beta: 7 HX81X-1-AE 0.833sa 12.53q,in 10D J6B270158-7-SAMP 02/05/2006 06:10 Scr: Beta: AmtRec: FOLDER #Containers: \ Aipha: WO Cnt: 7 STL Righland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis ICOC v4.8.20 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

1/4/2006 5:20:20 PN	Λ		***************************************	Sample	e Prepa	aration/Ana	alysis		Bala	nce 1d:1120373	922
536403, Brown and C Caldwell Report Due: 03/31/		S	7 Gross	Alpha Pr Alpha by DARD TES	GPC usi	/5014 ng Am-241 cu	rve		Sep1 DT/Ti	Pipet #: n Tech:	
Batch: 6060337	FILTER	pCi/sampl			PM, Qu	uote: EJ , 63	174		Sep2 DT/Ti	n Tech:	
SEQ Batch, Test: None									Pre	p Tech: Hansei	ıM.
Work Order, Lot,	Total	Initial Aliquot	91	racer	Dish	Ppt or	Count	Detector	Count On Off	CR Analy	
Sample DateTime	Amt/Unit	Amt/Unit	Prep	Date	Size	Geometry	Time Min	ld	(24hr) Circle	Init/Dat	
3 HX811-1-AE 16B270158-8-SAMP	0.833sa	12.54g,in				0.8		(0E	22.02	4/6/060	70
						U. D		(0 0		****	
02/05/2006 06:15	A 1 BE MINDE NIV	AmtRec: FOL	DER	#Contain	ers: 1			Scr:	Alpha		Beta:
9 HX812-1-AE	0.833sa	12.61g,in						سمال	uc. 1	7/2/4	1./2
16B270158-9-SAMP iii iii iiiiiiiiiiiiiiiiiiiii	1 i li li li 111					0.7		104	495) / ///	
02/05/2006 06:05		AmtRec: FOL	DER.	#Contain	ers: 1			Scr:	Alpha	:	Beta:
OHX813-1-AE	0.833sa	12.51g,in			•			1			
J6B270158-10-SAMP						0.0		777			
02/05/2006 06;40		AmtRec: FOL	DER	#Contain	ners: 1			Scr:	Alpha	:	Beta:
1 HX814-1-AE	0.833sa	12.54g,ìn									
J6B270158-11-SAMP		-				0.3		んこ			
		A-48 501	DED.	# O	4			Scr:	Alpha		Beta:
02/05/2006 07:20 I2HX815-1-AE	0.833sa	AmtRec: FOL 12.59g,in	DEH	#Contair	iers: i				Прпа		
J6B270158-12-SAMP	0.00080	12.559,111				1.3		Gu\			
											
02/05/2006 07:50		AmtRec: FOI	LDER	#Contair	ners: 1			Scr:	Alpha		Beta:
13HX816-1-AE J6B270158-13-SAMP	0.833sa	12.67 g ,in				2.3		/J E	1		
J66270136-13-SAMF						<i>U</i> 3					
02/05/2006 08:20		AmtRec: FO	LDER	#Contai	ners: 1	=		Scr:	Alpha	a:	Beta:
14HX817-1-AE	0.833sa	12.62g,in						1 6	Dal	240	4/7/06 m
J6B270158-14-SAMP 	 					0.8			' '	<u> </u>	11 1100
02/05/2006 08:45		AmtRec: FO	LDER	#Contai	ners: 1			Scr:	Alpha	1:	Beta:
			- -						6		
	4 1				0.000	- C	100	I Inquifficient Va	lume for Analysis		WO Cnt: 14
STL Richland Ko Richland Wa.	•	fi - Final Amt, di - Dilu - Reference Dt, ec-Enric				Page 2	157	- insunicient vo	iume ioi Analysis		ICOC v4.8

4/4/2006 5:20:20 PM		Sample Prep	aration/Ana	alysis		Balan	ce ld:1120373922	
536403, Brown and Caldwell Caldwell		A Gross Alpha PrpRC5016				P	ipet #:	
Report Due: 03/31/2006		7 Gross Aipha by GPC us 11 STANDARD TEST SET	ing Am-241 cu	rve		Sep1 DT/Tm	Tech:	
Batch: 6060337 FILTER	pCi/sampl		uote: EJ , 63°	174	, ,:= =	Sep2 DT/Tm	Tech:	
SEQ Batch, Test: None	Pagarit.	, -				•	Tech: HansenM	
								Commonweal
Work Order, Lot, Total Sample DateTime Amt/Ur	Initial Aliquot nit Amt/Unit	QC Tracer Dish Prep Date Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 HX818-1-AE 0.833sa	12.54g,in	1.5	, i	150		10 b	1246	1/7/00 x
J6B270158-15-SAMP		1	0.8	1		10 D		
02/05/2006 06:45	AmtRec: FOL	DER #Containers: 1			Scr:	Alpha:		Beta:
16H0EQF-1-AA-B	1.00sa,in					10c		
J6C010000-337-BLK			0.1			100		
02/05/2006 06:00	AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:
17H0EQF-1-AC-C	1.00sa,in	ASC0348	***			101		
J6C010000-337-LCS		03/30/06,pd 02/09/06,r	0.1	1/		104		
02/05/2006 06:00	AmtRec:	#Containers: 1		V	Sor:	Alpha:		Beta:
Comments: 19.00	lloden added	my 4-4-00						
All Clients for Batch: 536403, Brown and Caldw	ell	Brown & Caldwell	•	EJ , 6317	14			
HX81N1AE-SAMP Constituent L								
ALPHA RDL:20 H0EQF1AA-BLK:	pCi/sam LCL:	UCL: RPD:						
ALPHA RDL:20 H0EQF1AC-LCS:	pCi/sam LCL:	UCL: RPD:						
HX81N1AE-SAMP Calc Info: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N Sci.	Not.: Y	DRs: B				
HOEQF1AA-BLK:	-			DRs: B				
Uncert Level (#s).: 2 H0EQF1AC-LCS:	Decay to SaDt: Y							
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N Sci.	Not.: Y	DRs: B				
STL Richland Key: In - Initial	Amt, fi - Final Amt, di - Dilu	tod Amt e1 . Son1 e2 . Son2	Page 3	ISV	- Insufficient Vo	lume for Analysis	· · · · · · · · · · · · · · · · · · ·	WO Cnt: 17
· ·	Dt, r - Reference Dt, ec-Enrick		-	131		iaino ioi i margaro		ICOC v4.8.

4/11/2006 10:56:57 AM

ICOC Fraction Transfer/Status Report ByDate: 4/11/2005, 4/16/2006, Batch: '6060337', User: *ALL Order By DateTimeAccepting

Batch Wor	k Ord CurStat	tus A	ccepting		Comments
5060337					
4 <i>C</i>	CalcC	HansenM	3/20/2006 4:07	:32 PM	
ro		wagarr	IsBatched	3/1/2006 4:16:24 PM	ICOC_RADCALC v4.8.18
C		HansenM	InPrep2	3/20/2006 4:07.32 PM	RICH-RC-5016 REVISION 5
C		ScottM	InPrep2	3/31/2006 7:28:36 AM	RICH-RC-5014 REVISION 6
C		HansenM	Prep2C	4/4/2006 5:02:55 PM	RICH-RC-5014 REVISION 6
C		DAWKINSO	InCnt1	4/4/2006 5:34:23 PM	RICH-RD-0003 REVISION 4
C		StringerR	CalcC	4/7/2006 1:00:14 PM	RICH-RD-0003 REVISION 4
C		ScottM	3/31/2006 7:28	:36	
C		ScottM	4/4/2006 11:1 1	:18	
iC		HansenM	4/4/2006 5:02:5	55 PM	
C		DAWKINSO	4/4/2006 5:34:2	23 PM	
AC		StringerR	4/7/2006 1:00:1	14 PM	

AC: Accepting Entry; SC: Status Unange

STL Richland

Richland Wa. STL RICHLAND

4/11/2006 10):56:57 AM		Rpt DB Transfe	r log (Batch Res	ults)	SEVERN	STL
SDG or Batch	Rpt Db Id		LotSample Client Id	Matrix	Received Date	Sample Date Units Expected	Viold '/	olumes
<u> sotope </u> 31025	<u>MethodRT</u> 9HX81110	st_Q	Oc Analysis Date Result J6B2701588 P 0517	AIR	Tot Uncert Maa 2/27/2006 8:00:00			ZUILUS
ALPHA	BAS7 0		4/6/2006 8:46:58 PM 9.9486E-03	1.059E+00	1.059E+00 5.274E+00	PCI/SA 1	1.05+0	2.082E-2
BETA	BDS8 0		4/5/2006 10:15:47 AM 1.5137E+00	1.293E+00	1.298E+00 5.298E+00	PCI/SA	.0 1.0E+0	3.405E-2
31025	9HX81210		J6B2701589 000357	AIR	2/27/2006 8:00:00	2/5/2006 6:05:00 A	М	
ALPHA	BAS7 0		4/7/2006 8:42:10 AM 1.0284E+01	2.198E+00	2,444E+00 5.179E+00	PC//SA	1.0E+0	2.07E-2
BETA	BDS8 0		4/5/2006 10:15:47 AM 1.7618E+01	1.728E+00	2.098E+00 5.209E+00	PCI/SA	1.0 1.0E+0	3.295E-2
31025	9HX81310		J6B27015810 000358	AIR	2/27/2006 8:00:00	2/5/2006 6:40:00 A	М	
ALPHA	BAS7 0		4/7/2006 8:42:10 AM 4.1731E+00	1.552E+00	1.612E+00 4.862E+00	PCI/SA	1.0 1.0E+0	2.08E-2
BETA	BDS8 0		4/5/2006 10:15:50 AM 1.6272E+01		2.031E+00 5.341E+00		1.0E+0	3.367E-2
31025	9HX81410		J6B27015811 000359	AIR	2/27/2006 8:00:00		м	
ALPHA	BAS7 0		4/7/2006 8:42:10 AM 6.8426E+00	1.932E+00	2.058E+00 5.45E+00	PCI/SA	1.0E+0	2.079E-2
BETA	BDS8 0		4/5/2006 10:15:50 AM 1.8892E+D1		2.503E+00 4.713E+00		1.0 1.0E+0	3.318E-2
	9HX81510		J6B27015812 000360	AIR	2/27/2006 8:00:00		М	
31025 ALPHA	BAS7 0		4/7/2006 8:42:10 AM 1.6852E+01		3.144E+00 5.103E+00		1.0 1.0E+0	2.093E-2
	BD\$8 0		4/5/2006 10:15:50 AM 2.5147E+01		2.52E+00 5.06E+00		1.0 1.0E+0	3.357E-2
BETA			J6B27015813 000361	AIR	2/27/2006 8:00:00			
31025	9HX81610		4/7/2006 8:42:10 AM 9.3614E+00		2.319E+00 4.967E+00		1.0 1.0E+0	2.09E-2
ALPHA	BAS7 0		4/5/2006 10:15:50 AM 2.4664E+01		2.53E+00 5.184E+00		1.0 1.0E+0	3.3E-2
BETA	BDS8 0			AIR	2/27/2006 8:00:00			5.52.2
31025	9HX81710		0002:01001.		2.504E+00 5.119E+00		1.0 1.0E+0	2.095E-2
ALPHA	BAS7 0		4/7/2006 11:31:06 AM 1.0892E+01		2.509E+00 5.291E+00		1.0 1.0E+0	3.384E-2
BETA	BDS8 0		4/5/2006 11:54:24 AM 2.4118E+01	1.865E+00	2/27/2006 8:00:00			3.0046.2
31025	9HX81810		J6B27015815 000363					2.085E-2
ALPHA	BAS7 0		4/7/2006 11:31:06 AM -8.6245E-01		7.776E-01 4.857E+00		1.0 1.0E+0	3.447E-2
BETA	BDS8 0		4/5/2006 11:54:24 AM -1.2859E+00		1.222E+00 5.36E+00		1.0 1.0E+0	5.447E-2
31025	9HX81N10		J6B2701581 P 0510	AIR	2/27/2006 8:00:00			2 0045 0
ALPHA	BAS7 0		4/6/2006 6:03:23 PM 2.1099E+00		1.53E+00 5.957E+00		1.0 1.0E+0	2.091E-2
BETA	BDS8 0		4/5/2006 9:14:39 AM 1.3188E+01		1.89E+00 5.408E+00		0+30.1 0.1	3.278E-2
31025	9HX81Q10		J6B2701582 P 0511	AIR	2/27/2006 8:00:00			
ALPHA	BAS7 0		4/6/2006 6:03:23 PM 2.9199E+00		1.632E+00 5.973E+00		1.0 1.0E+0	2.082E-2
BETA	BDS8 0		4/5/2006 9:14:39 AM 1.1516E+01		1.81E+00 5.034E+00		1.0 1.0E+)	3.315E-2
31025	9HX81R10		J6B2701583 P 0512	AIR	2/27/2006 8:00:00			<u>-</u>
ALPHA	BAS7 0		4/6/2006 6:03:23 PM 4.8606E+00	1.709E+00			1.0 1.0E+0	2.087E-2
BETA	BDS8 0		4/5/2006 9:14:39 AM 1.3284E+01	1.666E+00	1.895E+00 5.53E+00	,	1.0 1.0E+0	3.319E-2
31025	9HX81T10		J6B2701584 P 0513	AIR	2/27/2006 8:00:00		М	
ALPHA	BAS7 0		4/6/2006 8:46:58 PM 9.6327E+00		2.454E+00 5.858E+00		1.0 t.0E+3	2.052E-2
8ETA	BDS8 0		4/5/2006 9:14:52 AM 1.9108E+01	1.8E+00				3.204E-2
31025	9HX81V10		J6B2701585 P 0514	AIR) 2/5/2006 8:15:00 A	М	
ALPHA	BAS7 0		4/6/2006 8:46:58 PM 9.0898E+00				1.0E+3	2.086E-2
BETA	BDS8 0		4/5/2006 9:14:52 AM 1.6437E+01	1.736E+00			1.0 1.0E+3	3,311E-2
31025	9HX81W10		J6B2701586 P 0515	AIR		2/5/2006 8:40:00 A	М	
ALPHA	BAS7 0		4/6/2006 8:46:58 PM 6.5328E+00				1.0 1.0E+0	2.095E-2
BETA	BDS8 0		4/5/2006 9:14:52 AM 1.3832E+01	1.591E+00			1.0 1.0E+0	3.342E-2
31025	9HX81X10		J6B2701587 P 0516	AIR	2/27/2006 8:00:00	2/5/2006 6:10:00 A	М	
ALPHA	BAS7 0		4/6/2006 8:46:58 PM 2.9152E+00	1.602E+00	1.63E+00 5.964E+00	D PCI/SA	1.0E+0	2.083E-2
ВЕТА	BDS8 0		4/5/2006 9:14:52 AM 1.3292E+01				1.0 1.0E+0	3.372E-2
31025	H0EQF1AB		J6C010000337 INTRA-LAB BL			2/5/2006 6:00:00 A	.M	
ALPHA	BAS7 0	В	4/7/2006 11:31:06 AM -2.781E-02			PCI/SA	1.0 1.0E+0	1.0E+0
31025	H0EQF1CS	~*	J6C010000337 INTRA-LAB CH			2/5/2006 6:00:00 A	.M	
31025 ALPHA	RAS7 0	S	4/7/2006 11:31:06 AM 2.3295E+00					1.0E+0
ALFIR	DAG! 0	3	WINDOOD I HOUSE CHEE BIGEOGRIAGE					

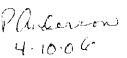
STL Richland, Wa Calc Review v4.8.18

^{6060337, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 17 | 0 | 0 | 0.

**Diff RptDb | Otims => .

Batch	Nbr: 6	060337	A	Ipha B	eta, Alph	na by GPC	-Am , l	Results	4	/7/2006 12:5	9:04 PM
					Sum	mary Rep	ort				
Status	Meth	Matrix	Wrk Ord	Paramet	er Sa Act	Uncert C	Q Units	Av ILcC	IDC	QC Yield	RYId
Alpha	by GF	'C-Am	Ric	hland Star	ndard Gross	Alpha/Beta W	Vo Blk Sub			BDCF.	
Calc	S 7	AIR	HX81N1AE	ALPHA	2.11E+00	(1.53E+00) L	J4 PCI/SA	R 2.48E+00	5.96E+00	m 100%	
Calc	S 7	AIR	HX81Q1AE	ALPHA	2.92E+00	(1.63E+00)	PCI/SA	R 2.52E+00	5.97E+00	100%	
Calc	S 7	AIR	HX81R1AE	ALPHA	4.86E+00	(1.78E+00)	PCI/SA	R 2.12E+00	5.25E+00	100%	
Calc	S7	AiR	HX81T1AE	ALPHA	9.63E+00	(2.45E+00)	PCI/SA	R 2.43E+00	5.86E+00	100%	
Calc	S7	AIR	HX81V1AE	ALPHA	9.09E+00	(2.26E+00)	PCI/SA	R 1.98E+00	4.93E+00	100%	
Calc	S 7	AIR	HX81W1AE	ALPHA	6.53E+00	(2.09E+00)	PCI/SA	R 2.47E+00	5.94E+00	100%	
Calc	S 7	AIR	HX81X1AE	ALPHA	2.92E+00	(1.63E+00)	PCI/SA	R 2.51E+00	5.96E+00	100%	
Calc	S 7	AIR	HX8111AE	ALPHA	9.95E-03	(1.06E+00) U	I4 PCI/SA	8 2.13E+00	5.27E+00	100%	
Calc	S 7	AIR	HX8121AE	ALPHA	1.03E+01	(2.44E+00)	PCI/SA	R 2.09E+00	5.18E+00	100%	
Calc	S7	AIR	HX8131AE	ALPHA	4.17E+00	(1.61E+00)	PCI/SA	R 1.94E+00	4.86E+00	100%	
Calc	S7	AIR	HX8141AE	ALPHA	6.84E+00	(2.06E+00)	PCI/SA	R 2.22E+00	5.45E+00	100%	
Calc	S 7	AIR	HX8151AE	ALPHA	1.69E+01	(3.14E+00)	PCI/SA	R 2.08E+00	5.10E+00	100%	
Cafe	S7	AIR	HX8161AE	ALPHA	9.36E+00	(2.32E+00)	PCI/SA	R 1.98E+00	4.97E+00	100%	
Calc	S 7	AIR	HX8171AE	ALPHA	1.09E+01	(2.50E+00)	PCI/SA	R 2.07E+00	5.12E+00	100%	
Calc	S 7	AIR	HX8181AE	ALPHA	-8.62E-01	(7.78E-01) U	I4 PCI/SA	R 1.94E+00	4.86E+00	100%	
Calc	S7	AIR	H0EQF1AA	ALPHA	-2.78E-02	√(1.75E-02) U	I4 PCI/SA	R 4.62E-02	1.13E-01	B 100%	
Calc	S7	AIR	H0EQF1AC	ALPHA	2.33E+00	(2.68E-01)	PCI/SA	R 4.33E-02	1.06E-01	S 100%	102%



() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 1

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh.mm, 24hr Time

RecCnt:17 RADCALC v4.8.21 STL Richland

Alpha Beta, Alpha by GPC-Am , Calculated Results Detailed Report

4/7/2006 12:59:05 PM

										Detailed	d Report								
}q S	tatus Method	Matrix	Protocol	Equation S	et W	rk Ord	Units/N	fatrix (QC/B	B Sa/On Date	AnalysisD	ate/PptWi	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent)	'Id Total/Analy	Vol Final/C	ount Vc
	alc \$7 3,P 0510	AIR	*STLE	GabWoBS ,J6B270	HX8 158-1 v4.8	IN1AE .21	PCI/S	4	02	2/05/06 06:00	04/06/06 00.4	18:03				1	1.00 S 0.020909 S		
Sq	Cnt Date	Paramete	r Samp	le Cnt Bkg	nd Cnt	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	Decay	Abn
0 0	04/06/06 19:18	8 ALPHA	14 / 150	25 452		GPC10C	1.5	N Y	N	3.8825E-01 (1.293E-02)	1.0000E+00 (0.000E+00)		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+0	0
Sq	Calc Date	Paramete	Avg	Sa Act	Q	Net	Cnt Rt	Dpm	Wo E	∃lk Dpm-	Blk Vo	Used		Yield,EnFe	t Chem Yie	d,EFctU IDC/ILc0		IDC StdDvI	MdC/LcC
	04/07/06	ALPHA		2.109854 (1.529821)	U4	3.8023		0.097		0.09793	·	1.00		100%		5.957067 2.478764			
Sq S	tatus Method	Matrix	Protocol	Equation S	et W	rk Ord	Units/N	atrix (ас/в	B Sa/On Date	AnalysisD			Sep2 Date	QC/Trace	er Vial Mult/Ent)		Vol Final/C	ount Vo
	alc S7 3,P 0511	AIR	'STLE	GabWoBS ,J6B270	HX8 158-2 v4.8	1 Q1AE 1.21	PCI/S	Α.	02	2/05/06 06:35	04/06/06 00.4 ,	18:03	<u>,,</u>	1	and the second s	1	1.00 S 0.02082 S		e-manus en selvide le extense en cu
\$q	Cnt Date	Paramete	r Samp	le Cnt Bkg	rnd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
0 0	04/06/06 19:1	3 ALPHA	18 150	29 452		GPC10D	1.5	N Y	N	4.1377E-01 (1.204E-02)	1.0000E+00 (0.000E+00)		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+0	0
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm	Wo E	3lk Dpm-	Blk Vo	Used		Yleid,EnFe	ct Chem Yi	d,EFetU IDC/ILet		MDC StdDvi	MdC/LcC
	04/07/06	ALPHA		2.919918 (1.632445)	<u>-</u> .	5.5840 (3.069		0.134		0.13495 (0.0750		1.00		100%		5.973422 2.515851	_		
Sq S	tatus Method	Matrix	Protocol	Equation S	et W	rk Ord	Units/N	latrix (QC/B	B Sa/On Date	AnalysisD	ate/PptW1	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent)	'ld Total/Analy	Vol Final/0	Count Vol
	alc S7 3,P 0512	AIR	*STLE	GabWoBS ,J6B270	HX8 158-3 v4.8	1R1AE	PCI/S/	4	02	2/05/06 07:15	04/06/06 00.4	18:03				1	1.00 S 0.020869 S		
Sq	Cnt Date	Paramete	r Samp	le Cnt Bkgı	rnd Cnt	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
0 0	04/06/06 19:18	3 ALPHA	19 150	18 452		GPC10E	1.5	N Y	N	3.8565E-01 (1.141E-02)	1.0000E+00 (0.000E+00)		100% 8%	N	e manoremente substanting a film of the page .	1.0000E+00 (0.000E+00)		1.0000E+0	0
Sq	Calc Date	Parameter	Avg	Sa Act	a	Net	Cnt Rt	Dpm	Wo E	31k Dpm-	Bik Vo	Used		Yield,EnFo	t Chem Yi	d,EFctU IDC/ILc0	BikLcC/N	DC StdDvl	VIdC/LcC
	04/07/06	ALPHA		4.860569 (1.780323)		8.6843 (3.053		0.225		0.22518) (0.0814	- 43	1.00		100%		5.251738 2.12154	}		,
Sq S	tatus Method	Matrix	Protocol	Equation S	et W	rk Ord	Units/N	latrix (QC/B	B Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent\	'ld Total/Analy	Vol Final/0	ount Vol
	alc S 7 3,P 0513	AIR	*STLE	GabWoBS ,J6B270	HX8 158-4 v4.8	1 T1AE .21	PCI/S/	4	02	2/05/06 07:45	04/06/06 00.4	20:46			Modern Company of the	1	1.00 S 0.020519 S		······································
Sq	Cnt Date	Paramete	r Samp	le Cnt Bkgı	nd Cnt	instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd		Abn
0 0	04/06/06 22:0	I ALPHA	34 150	24 452		GPC10A	1.5	N Y	N	3.9556E-01 (1.366E-02)	1.0000E+00 (0.000E+00)	N	100% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+0	
IDC -	(1s Uncertainiti Instrument Det Counts are De	ection Level in (Conc Units	 MLcC - Met 	thod Decis	ion Level	in Conc.L.	Inits, ME	DC- M	Page Inimum Detecta	e 1 ble Concentratio	n a - mm/dd:	(achhimm	24hr Time		RecC	Ont:4 F	RADCALC v	

⁵¹⁻⁸⁹ Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Ва	itch Nbr: 60	60337		.	Alpha	Beta	, Alpha	by GPC	C-Am , Ca	alculate	d Resu	ults		4/7/200	6 12:59:0	5 PM
Sq	Calc Date	Parameter	Avg	Sa Act	Q Ne	t Cnt Rt	Dpm Wo	Blk Dpm-	Blk Voi Us	ed	Yield,EnFo	t Chem Yle	d,EFctU IDC/ILcC	BikLcC/MDC	StdDvMdC.	/LcC
	04/07/06	ALPHA	R	9.632666 (2.453699)		69E-01 56E-02)	0.438793 (0.10895			1.00 Sa 27097)	100%		5.857968 2.429099			
Sq St	atus Method	Matrix P	rotoca	I Equation Set	Wrk Ord	Units/N	Matrix QC/E	3B Sa/On Date	AnalysisDate	/PptWt Seg	1/Sep2 Date	QC/Trac	er Vial Mult/EntY	ld Total/Analy Vol	Final/Cour	nt Vol
5 Ca 536403	alc \$7 I,P 0514	AIR '	STLE	GabWoBS ,36B27015	HX81V1AE 8-5 v4.8.21	PCI/S	A 0	2/05/06 08:15	04/06/06 20 00.4):46		<u></u>	1	1.00 Sa 0.020861 Sa		
Sq	Cnt Date	Parameter	Samı	ple Cnt Bkgrn	d Cnt Instr	Geom	Trc/Av E	nt Efficiency1	Efficiency 2	Ent Yld Fe	et Ent	Blk Value	Ingr Fct	Conv Fct/VoiAdj D	есау	Abn
0 0	4/06/06 22:01	ALPHA	31 150	17 452	GPC10	B 1.5	N N Y	4.0160E-01 (1.348E-02)	1.0000E+00 (0.000E+00)	N 100% 8%			1.0000E+00 (0.000E+00)		000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q Ne	t Cnt Rt	Dpm Wo	Blk Opm-	Bik Vol U:	sed	Yield,EnF	ct Chem Yi	d,EFctU IDC/ILcC	BIKLcC/MDC	StdDvMdC	C/LcC
	04/07/06	ALPHA	R	9.089839 (2.261169)		056E-01 23E-02)	0.420958 (0.10194			1.00 Sa 27097)	100%		4.930435 1.980688			
Sq S1	atus Method	Matrix F	Protoco	l Equation Set	Wrk Ord	Units/	Matrix QC/I	BB Sa/On Date	AnalysisDate	/PptWt Se	p1/Sep2 Date	QC/Trac	er Vial Mult/EntY	'Id Total/Analy Vo	Final/Cou	ınt Vol
1	alc S7 3,P 0515	AIR	*STLE	GabWoBS ,J6B27015	HX81W1AE 58-6 v4.8.21	PC1/S	A (02/05/06 08:40	04/06/06 20 00.3	0:46	 		1	1.00 Sa 0.020952 Sa		
Sq	Cnt Date	Parameter	Sam	pie Cnt Bkgrn	nd Cnt Instr	Geom	Trc/Av E	nt Efficiency1	Efficiency 2	Ent Yld F	ct Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj D	ecay	Abn
0 0	4/06/06 22:0	1 ALPHA	26 150	25 452	GPC10	C 1.5	N N Y	3.8841E-01 (1.293E-02)	1.0000E+00 (0.000E+00)	N 1009			1.0000E+00 (0.000E+00)		000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q No	et Cnt Rt	Dpm Wo	Blk Dpm	-8lk Vol U	sed	Yleld,Enf	ct Chem Y	ld,EFctU IDC/ILc0	BikLcC/MDC	StdDvMd0	C/LcC
	04/07/06	ALPHA	R	6.532807 (2.091364)		024E-01 748E-02)	0.303862 (0.09572			1.00 Sa 27097)	100%		5.942435 2.472675			
Sq S	tatus Method	Matrix I	Protoco	ol Equation Set	t Wrk Ord	Units/	Matrix QC/	BB Sa/On Date	AnalysisDate	√PptWt Se	p1/Sep2 Date	QC/Trac	cer Vial Mult/Ent\	rid Total/Analy Vo	l Final/Cou	ınt Vo
1	alc \$7 3,P 0516	AIR	*STLE	GabWoBS ,J6B2701	HX81X1AE 58-7 v4.8.21	PCI/S	Α (02/05/06 06:10	04/06/06 2 00.2	0:46			1	1.00 Sa 0.020835 Sa		
Sq	Cnt Date	Parameter	Sam	nple Cnt Bkgrr	nd Cnt Instr	Geom	Trc/Av E	int Efficiency1	Efficiency 2	Ent Yld F	ct Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj [ecay)	Abn
0 0	4/06/06 22:0	1 ALPHA	18 150	29 452	GPC10	DD 1.5	N N Y	(1.205E-02)	1.0000E+00 (0.000E+00)	N 100°			1.0000E+00 (0.000E+00)		0000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q N	et Cnt Rt	Dpm Wo	Bik Dpm	-Bik Vol U	lsed	Yield,Enf	ct Chem Y	'id,EFetU IDC/ILc	C BIKLcC/MDG	StdDvMdi	IC/LcC
	04/07/06	ALPHA	R	2.915156 (1.629783)	•	407E-02 691E-02)	0.13483 (0.07499			1.00 Sa 27097)	100%		5.96368 2.51174			
Sq S	tatus Method	Matrix	Protoco	ol Equation Se	t Wrk Ord	Units/	Matrix QC/	BB Sa/On Date	AnalysisDate	e/PptWt Se	p1/Sep2 Dat	e QC/Tra	çer Vial Mult/Ent	Yid Total/Analy Vo	ol Final/Cou	unt Vo
	alc S7 3,P 0517	AIR	*STLE	GabWoBS ,J6B2701	HX8111AE 58-8 v4.8.21	PCI/S	A ·	02/05/06 06:15	04/06/06 2 00.8 /	0:46			1	1.00 Sa 0.020816 Sa	PER TOTAL TRANSPORTER TOTAL PROPERTY OF THE PERSON OF THE	Salaten vila et vilane i vene
Sq	Cnt Date	Parameter	r Sam	nple Cnt Bkgri	nd Cnt Instr	Geom	Trc/Av E	nt Efficiency1	Efficiency 2	Ent YId I	ct Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj I	Decay	Abn
IDC -	Instrument De	tection Level in C	Conc Un	esult is Less Than nits, MLcC - Meth tion of Each Sr-8	hod Decision Let	rel in Conc	Units, MDC- esult Digits N	Minimum Detect	ge 2 table Concentration icants, Date/Time	· mm/dd/yy hh	mm, 24hr Tir	ne	Rec		DCALC v4.8 . Richland	8.21

O 04/06/06 22:01 Sq Calc Date 04/07/06 / Gq Status Method M 3 Calc S7 Al	Parameter ALPHA		18 452 Sa Act 0.009949 (1.058725)	Q	PC10E 1.5		Υ		8498E-01 .139E-02)		N	100%	N		1.0000E+00		1.0000E÷00	
04/07/06 /	Parameter ALPHA	Avg R (Sa Act D.009949			Rt	D 144		. 1002 02,	(0.000E+00)	8%			(0.000E+00)	48.039311		
Sq Status Method M	المستعدد والمالية الترسالة			U4			Dbw &	o Blk	Dpm-B	lk Vo	ol Used		Yield,EnFct	Chem Yid	,EFctU IDC/ILcC	BlkLcC/M	DC StdDvM	dC/LcC
`	atrix Pr		(1.000120)		1.76991E-0 (1.8835E-0		0.00046 0.0489		0.00046 (0.048926	6) ((1.00 0.027097		100%		5.274278 2.130646			
9 Calc S7 Al		otocol	Equation Set	Wri	ord Ur	nits/Mat	trix QC	/BB 9	Sa/On Date	Analysis	Date/PptW	t Sep1/	Sep2 Date	QC/Trace	r Vial MulVEntY	id Total/Analy	Vol Final/Co	ount Vol
536403,000357	R *S	STLE	GabWoBS ,J6B27015	HX812 8-9 v 4 .8.3		CI/SA R	·	02/0	5/06 06:05	04/07/0 00.7	6 08:42	· · · · · · · · · · · · · · · · · · ·			1	1.00 Sa 0.020704 Sa		erreggen gång væld under vælde flikkelid
Sq Cnt Date	Parameter	Samp	ole Cnt Bkgrnd	d Cnt	Instr Ge	eom T	rc/Av	Ent 8	Efficiency1	Efficiency 2	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0 04/07/06 09:57		34 150	20 500	G	iPC10A 1.5		N Y			1.0000E+00 (0.000E+00		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
Sq Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt I	Rt	Dpm W	o Bik	Dpm-B	lik Vo	ol Used		Yield,EnFc	Chem Yid	I,EFctU IDC/ILcC	BIKLcC/M	DC StdDvM	ldC/LcC
04/07/06	ALPHA		10.284012 (2.444276)		1.86667E- (3.9889E-0		0.47267 (0.1090		0.472672 (0.10908		1.0 0.027097	0 Sa ')	100%		5.178781 2.092961			
Sq Status Method N	latrix Pr	otocol	Equation Set	Wrl	k Ord U	nits/Ma	trix QC	C/BB 9	Sa/On Date	Analysisl	Date/PptW	t Sep1.	Sep2 Date	QC/Trace	rVial Mult/EntY	id Total/Analy	Vol Final/C	ount Vo
10 Calc S7 Al 536403,000358	R *	STLE	GabWoBS ,J6B27015	HX81 : 8-10 v4.8		CI/SA R		02/0	5/06 06:40	04/07/0 · 00.6	6 08:42				1	1.00 S 0.020804 S		<u>gaga ag</u> agaranan malajar
Sq Cnt Date	Parameter	Samp	ole Cnt Bkgrn	d Cnt	Instr G	eom T	rc/Av	Ent	Efficiency1	Efficiency 2	2 × Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0 04/07/06 09:57	ALPHA	17 150	18 500	G	PC10B 1.5	5	N Y		•	1.0000E+00		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
Sq Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt	At	Dpm W	/o Blk	Dpm-E	Bik V	oi Used		Yield,EnFc	t Chem Ylo	1,EFctU IDC/ILcC	BikLcC/M	IDC StdDvN	/ldC/LcC
04/07/06	ALPHA		4.173116 (1.611591)		7.73333E- (2.8767E-		0.1927 (0.0736		0.192737 (0.07362		1.0 0.027097	0 Sa 7)	100%		4.862264 1.944824			
Sq Status Method N	latrix P	rotoco	Equation Set	Wr	k Ord U	nits/Ma	trix Q	C/BB:	Sa/On Date	Analysis	Date/PptW	t Sep1	/Sep2 Date	QC/Trace	er Vial Mult/Ent)	fld Total/Analy	Vol Final/C	ount Vo
11 Calc S7 A 536403,000359	IR *	STLE	GabWoBS ,J6827015	HX81 8-11 v4.		CI/SA IR		02/0	5/06 07:20	04/07/0	6 08:42				1	1,00 S 0.02079 S		
Sq Cnt Date	Parameter	Sam	ple Cnt Bkgrn	d Cnt	Instr G	ieom 7	Frc/Av	Ent	Efficiency1	Efficiency	2 Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	Decay	Abn
0 04/07/06 09:57	ALPHA	25 150	22 500	C	3PC10C 1.	5	N Y		.8841E-01 1.293E-02)	1.0000E+0 (0.000E+0		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+0	0
Sq Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt	Rt	Dpm V	Yo Blk	Dpm-E	3lk V	ol Used		Yield,EnFo	t Chem Yi	d,EFctU IDC/ILct	C BlkLcC/N	IDC StdDvM	MdC/LcC
04/07/06	ALPHA		6.842621 (2.057725)	-	1.22667E- (3.4628E-	•	0.3158 (0.0932		0.315816 (0.09325		1.0 (0.02709)	0 Sa 7)	100%		5.45032 2.22258			
() - (1s Uncertainities IDC - Instrument Detec), Q - Qualifier	, U Res	sult is Less Than	Lc = 1.6	45 * TPU				Page		A	***************************************	ersya maga saarat yaasaa maasa yaas		Rec		RADCALC v4	

	Batch Nbr: 6	060337			Α	lpha	Beta,	Alpl	na	by GPC	C-Am ,	Calcu	lated	Resu	ılts		4/7/2	2006 12:59	9:05 PN
Sq	Status Method	Matrix	Protocol	Equation	Set W	rk Ord	Units/Ma	atrix Q	C/BB	Sa/On Date	AnalysisD	ate/PptWt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/EntY	ld Total/Analy	Vol Final/C	ount Vo
	Calc S7 103,000360	AIR	*STLE	GabWoB	3S HX8 70158-12 v	151AE 1.8.21	PCI/SA AIR		02/	05/06 07:50	04/07/06 01.3	6 08:42			. 	1	1.00 Sa 0.020933 Sa		
Sc	Cnt Date	Paramete	r Samı	ale Cnt Bl	kgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/07/06 09:5	7 ALPHA	55 150	2 5	2 00	GPC10D	1.5	N Y		4.1203E-01 (1.199E-02)	1.0000E+00 (0.000E+00		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	0
٤	Gq Calc Date	Paramete	r Avg	Sa Act	Q	Net (Ont Rt	Dpm \	Vo Bi	k Dpm-	Blk Vo	ol Used		Yield,EnFo	t Chem Yi	d,EFctU IDC/ILcC	BIkLcC/M	DC StdDvA	/IdC/LcC
	04/07/06	ALPHA		16.851558 (3.143811		3.2266 (5.032		0.7831 (0.139		0.78311 (0.1391		1.00 0.027097		100%		5.102842 2.080882			
Sq	Status Method	Matrix	Protoco	Equation	Set W	rk Ord	Units/M	atrix C	C/BB	Sa/On Date	Analysisü	Date/PptWi	Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	ld Total/Analy	Vol Final/C	ount Vo
	Calc S7 403,000361	AIR	*STLE	GabWoE	3S HX8 270158-13 v	161AE 4.8.21	PCI/SA AIR		02/	05/06 08:20	04/07/0 02.3	6 08:42				1	1.00 S 0.020898 S		
S	Cnt Date	Paramete	er Sam	pie Cnt B	kgrnd Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	ž Ent	Yld Fct	Ent	Bik Value	ingr Fet	Conv Fct/VolAdj	Decay	Abn
0	04/07/06 09:5	7 ALPHA	30 150		7 500	GPC10E	1.5	N Y		3.8222E-01 (1.131E-02)	1.0000E+00 (0.000E+00		100% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+0	0
	Sq Calc Date	Paramete	r Avg	Sa Act	Q	Net	Cnt Rt	Dpm \	No Bl	k Dpm-	Bik V	ol Used		Yield,EnFo	ct Chem Yi	d,EFctU IDC/ILcC	BikLcC/M	DC StdDvf	MdC/LcC
	04/07/06	ALPHA	R	9.361387 (2.318977		1.6600 (3.7 43		0.4343 (0.104		0.4343 (0.1047	,	0.027096	,	100%		4.966866 1.975181			
Sq	Status Method	Matrix	Protoco	l Equation	n Set V	Vrk Ord	Units/M	atrix C	C/BB	Sa/On Date	Analysisi	Date/PptW	t Sep1/	Sep2 Date	QC/Trac	er Via) Mult/EntY	'ld Total/Analy	Vol Final/0	Count Vo
	Calc \$7 403,000362	AIR	*STLE	GabWoE ,J6B2	3S HX8 270158-14 v	171AE 4.8.21	PCI/SA AIR		02	/05/06 08:45	04/07/0 00.8			., ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1	1.00 S 0.020955 S		***************************************
S	q Cnt Date	Paramete	er Sam	ple Cnt 8	kgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Abn
0	04/07/06 12:4	6 ALPHA	36 150		20 500	GPC10A	1.5	N Y		3.9470E-01 (1.363E-02)	1.0000E+00 (0.000E+00		100% 8%	N	•	1.0000E+00 (0.000E+00)		1.0000E+0	0
Ŀ	Sq Calc Date	Paramete	r Avg	Sa Act	Q	Net	Cnt Rt	Dpm '	Wo B	ik Dpm-	Bik V	ol Used		Yield,EnFe	ct Chem Yi	d,EFctU IDC/ILc0	BlkLcC/N	IDC StdDvl	MdC/LcC
	04/07/06	ALPHA	R	10.89235 (2.503519		2.0000 (4.098	00E-01 8E-02)	0.5067 (0.112		0.50671 (0.1128	1	1.0 0.027097	0 Sa ')	100%		5.119454 2.068984			
Sq	Status Method	Matrix	Protoco	l Equation	n Set Y	Vrk Ord	Units/M	atrix C	C/BE	Sa/On Date	Analysisi	Date/PptW	t Sept/	/Sep2 Date	QC/Trac	er Vial Mult/Ent\	/id Total/Analy	Vol Final/0	Count Vo
	Calc S7 403,000363	AIR	*\$TLE	GabWoE	BS HX8 270158-15 v	3 181AE 4.8.21	PCI/SA	1	02	/05/06 06:45	04/07/0 00.8	6 11:31				1	1.00 S 0.020846 S		
s	q Cnt Date	Paramete	er Sam	ple Cnt B	lkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency:	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Abr
0	04/07/06 12:4	6 ALPHA	3	1	18	GPC10E	1.5	N		4.0087E-01	1.0000E+0		100%	N	·		4.5045E-01	1.0000E+0	00
			150	5	500			Υ		(1.346E-02)	(0.000E+00	0)	8%			(0.000E+00)	47.970384		
_	/d = 1.1===:\d-1-	4-a) O D			-					Pag	- A			· *** ***	K-L-1	Paci	Ont:15 F	RADCALC v	4821
IDO Sr-l	1s Uncertain - Instrument De 39 Counts are D	tection Level in	Conc Uni	ts. MLcC -	Method Dec	ision Level	in Conc U	nits, MD sult Digit	C- Mi s May	nimum Detecta	able Concentrat	tion ne - mm/do	ɪ/yy hh:mn	n, 24hr Time	e	nect		TL Richlan	

he Combination of Each Sr-89/90 and Y-90 Count, All Hesult Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

В	atch Nbr: 60	60337			ΑI	pha E	Beta,	Alph	na t	by GPC	:-Am , (Calcu	lated	l Resu	ts		4/7/200	06 12:59:0	6 PN
Sq	Calc Date	Parameter	Avg	Sa Act	Q	- Net Cı	nt Rt	Dpm V	Vo Blk	Dpm-I	3lk Vol	Used		Yield,EnFct	Chem Yld,	EFetU IDC/ILcC	BikLcC/MDC	StdDvMdC)/LcC
-	04/07/06	ALPHA	R	-0.862452	U4	-1.60000	E-02	-0.0399	913	-0.03991	3	1.00	Sa	100%		4.856908			
				(0.777569)		(1.4329)	E-02)	(0.0359	913)	(0.03591	(3)	.027097)				1.942681			
q S	atus Method	Matrix	Protoco	Equation Set	Wr	k Ord	Units/Ma	atrix Q	C/BB	Sa/On Date	AnalysisDa	ste/PptWt	Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy Vol	Final/Cour	nt Vol
6 C	BIC S7 IA-LAB BLANK	AIR	'STLE	GabWoBS ,J6C01000			PCI/SA AIR	В	02/0	5/06 06:00	04/07/06 00.1	11:31			**************************************	1	1.00 Sa 1.00 Sa		
Sq	Cnt Date	Paramete	r Samı	ple Cnt Bkgrnd	I Cnt	Instr	Geom	Trc/Av	€nt	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj De	есау	Abn
) (4/07/06 12:46	ALPHA	3	22	G	PC10C	1.5	N	N 3	.8874E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045 E -01 1.0	0000E+00	
			150	500				Υ	(1.295E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm V	Vo Bik	Dpm-l	Bik Vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILc0	BikLeC/MDC	StdDvMdQ	C/L¢C
	04/07/06	ALPHA	Ħ	-0.02781	U4	-2.4000	E-02	-0.061	738	-0.06173	38	1.00	Sa	100%		0.113218	}		
				(0.017469)		(1.4877	≣-02)	(0.038	543)	(0.03864	13) (0	.017321)	•			0.046169)		
Sq S	tatus Method	Matrix	Protoco	Equation Set	Wr	k Ord	Units/Ma	atrix Q	С/ВВ	Sa/On Date	AnalysisDa	ate/PptWt	Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	'id Total/Analy Vol	Final/Cou	nt Vo
17 C	alc S7	AIR	*STLE	GabWoBS	H0EG	F1AC	PCI/SA	S	02/0	5/06 06:00	04/07/06	11:31			ASC034	8 1	1.00 Sa		
),INTF	RA-LAB CHECK			,J6C0100	00-337		AIR				00.1				ASC034	8 Alq	1.00 Sa		
Sq	Cnt Date	Paramete	r Sam	ple Cnt Bkgrnd	d Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj D	ecay	Abn
) (4/07/06 12:46	ALPHA	328	22	G	PC10D	1.5	N	N 4	.1432E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01 1.0	0000E+00	
			150	500				Υ	(1.205E-02)	(0.000E+00)		8%			(0.000E+00)	1.00		
Sq	Calc Date	Paramete	r Avg	Sa Act	Q	Net C	nt Rt	Dpm V	Vo Blk	Dpm-l	Bik Vo	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILc0	BIKLcC/MDC	StdDvMdC	C/LcC
	04/07/06	ALPHA	R	2.329522		2.14267	E+00	5.1715	44	5.17154	4	1.00	Sa	100%	102%	0.106228	3		
				(0.268054)		(1.2110	E-01)	(0.528	426)	(0.52842	26) (0	.017321))			0.043319	3		

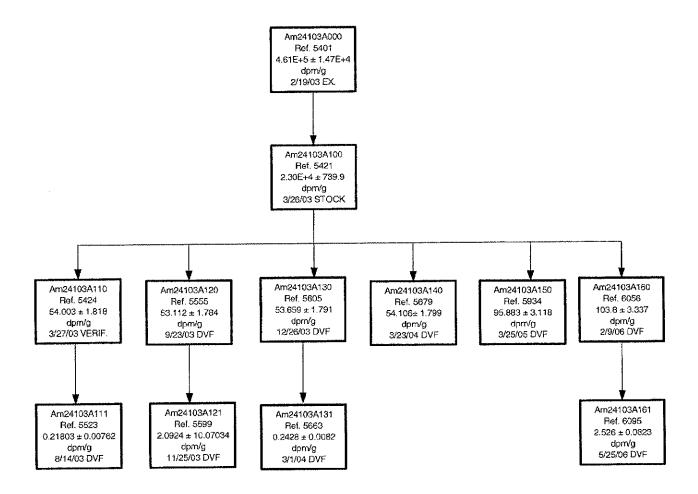
^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 5
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

ALPHA STANDARDS AND TRACEABILITY

0.20.200	12:07:13 PM	St	andarc	l Ma	ateria	I F	raction	าร (Vi	ials)			
Vial	Prep: 5/25/05 to	5/27/06, SM F	ractionIdentifie	r Like: A	ASC0348%	, Orde	r by SMIdenti	fier,Constitu	.entCode,Si	//////////////////////////////////////	ntifier	
al Identifier	Constituent	Prep Activity/	Concentration		Std Wt U	sed	Prep,Deca	yed To Date	Prep by	Std Decayer	d Activity/Conc	entratio
	Parent Sta	ndard: AM241	103A160	Ref:	2/9/2006		1.0380E+	02 ± 3.25	3E+00 DF	PM/G		
C0348	AM-241	5.0851E+00	± 1.600E-01	DPM	0.049	g	3/30/2006	3/30/2006	Armstron	.0378E+02	± 3,252E+00	DPN
		5.0851E+000	0 ± 5.085E+00	00 (1))		5.0851E-	-000 , 5.08	51E+000			

* - Isotope is an Impurity

AM24103A000



AM241-2003

ISOTOPE DILUTION RECORD

1) Prepared by tda	2) Date Prepared	2/9/2006
3) Source Identification Number / Ref. Number	AM24103A100	5421
4) Source Activity (dpm ± dpm/g)	2.2910E+04 ±	7.365E-02
5) Percent error of Source Activity	3.215 %	
6) Weight of Source Material used (g)	1.0007	
7) (% Error) of Weight of Source Material used	0.4797 %	
8) Diluent	2 M HNO3	
9) Total Weight of the Dilution (g)	220.87	
10) (% Error) of Total Weight of the Dilution	0.1358 %	
11) Specific Activity of Diluted Solution dpm/g	1.0380E+02 ±	3.377E+00
12) Total Uncertainty	3.253 %	
13) Dilution Identification Number / Ref. Number	AM24103A160	6056
14) Calibration Reference Date	2/9/2006	
15) Isotope Inventory File update by/date	tda	2/9/2006
16) Reviewed by/date	Management of the state of the	
17) Location <u>gclab</u>	18) Exhausted	y ₁
*******************	**********	
CALCULATIONS	;	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = \(\(\(\) \end{arror} \) (% error of Source Activity \(\) \(2 + \)	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

03A.xls

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared			3/25/2005
3) Source Identification Number / Ref. Number	AM24103A100			5421
4) Source Activity (dpm ± dpm/g)	2.2940E+04	. :	±	7.375E+02
5) Percent error of Source Activity	3.215	-%		
6) Weight of Source Material used (g)	1.0186	-		
7) (% Error) of Weight of Source Material used	0.4712	.%		
8) Diluent	2M HN03-P0500135	-		
9) Total Weight of the Dilution (g)	243.7	-		•
10) (% Error) of Total Weight of the Dilution	0.1231	_%		
11) Specific Activity of Diluted Solution dpm/g	9.5883E+01	_ ;	±	3.118E+00
12) Total Uncertainty	3.252	.%		
13) Dilution Identification Number / Ref. Number	AM24103A150			5934
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	AM24103A150 3/25/2005	_		5934
•		_		5934 3/25/2005
14) Calibration Reference Date	3/25/2005	-		
14) Calibration Reference Date15) Isotope Inventory File update by/date	3/25/2005 W.G	-		3/25/2005
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	3/25/2005 W.G sew	- -		3/25/2005
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1132 	3/25/2005 W.G sew 18) Exhausted	- -		3/25/2005
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1132 **********************************	3/25/2005 W.G sew 18) Exhausted	- - -		3/25/2005

Form: CC-006, 7/15/99, Rev 3

12) % Total Uncertainty =

(% error of Source Activity ^2 + % error of Wt. Used^2 + % error of Dilution Wt.^2)

03A.xls

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	3/23/2004
3) Source Identification Number / Ref. Number	AM24103A100	5421
4) Source Activity (dpm ± dpm/g)	2.2977E+04	7.387E+02
5) Percent error of Source Activity	3.215 %	
6) Weight of Source Material used (g)	0.5744	
7) (% Error) of Weight of Source Material used	0.8357 %	
8) Diluent	2M HNO3-P0400085	
9) Total Weight of the Dilution (g)	243.93	
10) (% Error) of Total Weight of the Dilution	0.1230 %	
11) Specific Activity of Diluted Solution dpm/g	5.4106E+01 ±	1.799E+00
12) Total Uncertainty	3.324 %	
13) Dilution Identification Number / Ref. Number	AM24103A140	5679
14) Calibration Reference Date	3/23/2004	
15) Isotope Inventory File update by/date	W.G	3/23/2004
16) Reviewed by/date	SEW	3/26/2004
17) Location QCLAB/STWT0942	18) Exhausted	
**************************************	*********************************	*
CALCULATIONS	•	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	l / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error o	of Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

03A.xls

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	12/26/2003
3) Source Identification Number / Ref. Number	AM24103A100	5421
4) Source Activity (dpm ± dpm/g)	2.2986E+04 ±	7.390E+02
5) Percent error of Source Activity	3.215 %	
6) Weight of Source Material used (g)	0.5414	
7) (% Error) of Weight of Source Material used	0.8866 %	
8) Diluent	2M HNO3-P0300705	
9) Total Weight of the Dilution (g)	231.92	
10) (% Error) of Total Weight of the Dilution	0.1294 %	
11) Specific Activity of Diluted Solution dpm/g	5.3659E+01 ±	1.791E+00
12) Total Uncertainty	3.338 %	
13) Dilution Identification Number / Ref. Number	AM24103A130	5605
14) Calibration Reference Date	12/26/2003	
15) Isotope Inventory File update by/date	W.G	12/26/2003
16) Reviewed by/date	SEW	1/5/2004
17) Location QCLAB/STWT0894	18) Exhausted	
CALCULATIONS	**************************************	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	/ Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error of I	Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/23/2003
3) Source Identification Number / Ref. Number	AM24103A100	5421
4) Source Activity (dpm ± dpm/g)	2.2996E+04 ±	7.393E+02
5) Percent error of Source Activity	3.215 %	
6) Weight of Source Material used (g)	0.4983	
7) (% Error) of Weight of Source Material used	0.9633 %	
8) Diluent	2M HNO3-P0300455	
9) Total Weight of the Dilution (g)	215.75	
10) (% Error) of Total Weight of the Dilution	0.1390 %	
11) Specific Activity of Diluted Solution dpm/g	5.3112E+01 ±	1.784E+00
12) Total Uncertainty	3.359 %	
13) Dilution Identification Number / Ref. Number	AM24103A120	5555
14) Calibration Reference Date	9/23/2003	
15) Isotope Inventory File update by/date	W.G	9/23/2003
16) Reviewed by/date	SEW	9/24/2003
17) Location QCLAB/STWT0853	13) Exhausted	
######################################	***************************************	
CALCULATIONS		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used *	100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	/ Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + %	error of Wt. Used^2 + % error of Dil	ution Wt.^2)

Form: CC

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	i	3/26/03
3) Source Identification Number / Ref. Number	AM24103A000		5401
4) Source Activity (dpm ± dpm/g)	4.6049E+05	±	1.474E+04
5) Percent error of Source Activity	3.2	%	
6) Weight of Source Material used (g)	5.0651	_	
7) (% Error) of Weight of Source Material used	0.0948	_%	
8) Diluent	2M HNO3-P0300164	_	
9) Total Weight of the Dilution (g)	101.35	_	
10) (% Error) of Total Weight of the Dilution	0.2960	. %	
11) Specific Activity of Diluted Solution dpm/g	2.3014E+04	<u>±</u>	7.399E+02
12) Total Uncertainty	3.215	.%	
13) Dilution Identification Number / Ref. Number	AM24103A100		5421
14) Calibration Reference Date	3/26/03		
15) Isotope Inventory File update by/date	W.G		3/26/03
6) Reviewed by/date	SEW		3/26/03
7) Location QCLAB/STWT0754	18) Exhausted		
**************************************	******	******	****
CALCULATIONS			
) % Error of Wt. used = (0.0048 / Weight of Source Material used	1 * 100)		
0) % error of Dilution Wt. = $(0.3 / Total Weight of Dilution * 100)$			
 Specific Activity = Source Activity * Wt. of Source Material us 	ed / Total Wt. of the Dilu	ıtion	
?) % Total Uncertainty = (% error of Source Activity ^2 + %	6 error of Wt. Used^2 + %	error of D	llution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev</u> 3

ISOTOPE RECORD FORM

1) IsotopeAm-241	2) Reference Number	5401	
3) Half Life433 yrs.	4) Storage Location	Std. Lab	
5) Source Identification Number	Am2410.	3A000	

6) Activity as Received Units	3.923E+0	04 dps	
7) Overall Uncertainty Percent	3.2%	6	
8) Reference Date / Time	19-FEB-03 12:00 i	EST (9:00AM)	
9) Activity dpm/g	4.6056E+5 ± 1.47	740E+4 dpm/g	
10) Volume or Mass (ml/g)	5.11065	9 g	
11) Calibrated by	ANALYT	ics	
12) Certificate Solution Number65621-310			
**************************************	**************************************	****	
13) Date Received		/24/03	
14) Surveyed by		W.G	
15) Survey Reading (Beta/Gamma) cp		ide of surface	
16) Survey Reading (Alpha) com		ide of surface	
*******************************	**********	*****	
17) Activity Conversion 3 <u>.923E</u> +04dps*	*60s/m/5.011069g = 4.606E+	-05 + 1.474F+04 dpm/a	
		<u> </u>	
18) Remarks			
19) Isotope File Updated by	W.G 2/24/03		
20) QC Approved	SEW 3/11/0	03	

Form No.: CC-008, 3/95, Rev. 2 STL RICHLAND



ANALYTICS

1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 · U.S.A. Phone (404) 352-8677 Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

65621-310

Am-241 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:

Am-241

ACTIVITY (dps):

3.923 E4

HALF-LIFE:

4.322 E2 years

CALIBRATION DATE:

February 19, 2003 12:00 EST

TOTAL UNCERTAINTY*:

3.2%

SYSTEMATIC:

2.2%

RANDOM:

1.0%

*99% confidence level.

5.11069 grams 1M HCl solution.

Impurities: γ-impurities <0.1%

 α -impurities <0.1%

P O NUMBER 1703541-000 OP, Item 1

SOURCE PREPARED BY: WTaerlaeve

M. Taskaeva, Radiochemist

Q A APPROVED:

ALPHA CONTINUING CALIBRATION

Quality Assurance Report. Generated 26-MAY-2006 11:37:20.80

QA Filename : \$DISK1:[QUAD10.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : Quad10A (Hex 1) alpha %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 44.500000 Upper Bound : 52.200001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 48.359322 Std Deviation : 1.281971

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:04	СНК	49.2000		-
2-MAR-2006 06:04	CHK	49.1000		
3-MAR-2006 06:05	CHK	49.0000		
4-MAR-2006 06:22	CHK	49.2000		
5-MAR-2006 09:18	CHK	48.7000		
6-MAR-2006 05:06	CHK	49.5000		
7-MAR-2006 05:11	CHK	49.6000		
8-MAR-2006 05:44	CHK	49.0000	i i i	
9-MAR-2006 05:40	CHK	49.6000	İİİ	
10-MAR-2006 05:46	CHK	1.3000	Be Ac	R
10-MAR-2006 06:30	CHK	48.8000)	•
11-MAR-2006 07:49	CHK	49.5000		
12-MAR-2006 07:33	CHK	49.2000		
13-MAR-2006 05:13	CHK	49.3000)	
14-MAR-2006 04:59	CHK	49.3000		
15-MAR-2006 06:14	CHK	49.0000		
16-MAR-2006 06:18	CHK	49.2000		
17-MAR-2006 06:23	CHK	49.6000		
18-MAR-2006 07:00	CHK	49.4000)	
19-MAR-2006 07:00	CHK	49.5000		
20-MAR-2006 05:03	CHK	49.5000		

1-MAR-2006 05:04 CHK	41.6000
Measurement Time Sample ID Sample A	analyst Value LU SD UD BS Rej
Sample Driven N-Sigma Test Parameter Start Date : 1-JUL-2005 00:00 End Date Mean : 41.508381 Std Deviation	: 1-JAN-2006 00:00
Investigate Level: 2.000000 Action Lev	vel: 3.000000
Lower/Upper Bounds Test Parameters Lower Bound : 37.799999 Upper Bound	
Description : Quad10B (Hex 2) alpha %Enter Parameter Units : Parameter Type	
Multi-Test Full Report	
12-APR-2006 06:20 CHK	49.5000
11-APR-2006 06:28 CHK	48.9000 49.4000
9-APR-2006 07:52 CHK 10-APR-2006 05:13 CHK	49.1000
Measurement Time Sample ID Sample A	Analyst Value LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (co	ntinued) Page : 2
8-APR-2006 07:49 CHK	49.1000
7-APR-2006 07:11 CHK	49.1000
6-APR-2006 05:49 CHK	49.3000
5-APR-2006 05:32 CHK	49.1000 49.0000
3-APR-2006 04:54 CHK 4-APR-2006 05:02 CHK	49.5000
31-MAR-2006 04:58 CHK	49.5000
30-MAR-2006 05:08 CHK	49.4000
29-MAR-2006 06:18 CHK	50.4000
28-MAR-2006 06:06 CHK	49.2000
27-MAR-2006 05:06 CHK	49.4000
25-MAR-2006 06:59 CHK 26-MAR-2006 07:20 CHK	49.3000
24-MAR-2006 05:07 CHK	49.5000
23-MAR-2006 05:41 CHK	49.1000
22-MAR-2006 05:44 CHK	49.2000
21-MAR-2006 05:00 CHK	49.4000

2-MAR-2006 06:04 CHK	41.8000
3-MAR-2006 06:05 CHK	41.8000
4-MAR-2006 06:22 CHK	41.7000
5-MAR-2006 09:18 CHK	42.3000
6-MAR-2006 05:06 CHK	41.8000
7-MAR-2006 05:11 CHK	41.7000
8-MAR-2006 05:44 CHK	41.6000
9-MAR-2006 05:40 CHK	41.8000
10-MAR-2006 05:46 CHK	1.1000 Be Ac R
10-MAR-2006 06:30 CHK	41.4000
11-MAR-2006 07:49 CHK	42.2000
12-MAR-2006 07:33 CHK	42.2000
13-MAR-2006 05:13 CHK	41.8000
14-MAR-2006 04:59 CHK	41.4000
15-MAR-2006 06:14 CHK	41.9000]
16-MAR-2006 06:18 CHK	41.9000
17-MAR-2006 06:23 CHK	41.4000
18-MAR-2006 07:00 CHK	41.7000
19-MAR-2006 07:00 CHK	42.0000
20-MAR-2006 05:03 CHK	41.8000
21-MAR-2006 05:00 CHK	41.9000
22-MAR-2006 05:44 CHK	41.5000
23-MAR-2006 05:41 CHK	41.6000
24-MAR-2006 05:07 CHK	41.8000
25-MAR-2006 06:59 CHK	41.4000
26-MAR-2006 07:20 CHK	41.8000
27-MAR-2006 05:06 CHK	41.6000
28-MAR-2006 06:06 CHK	41.9000
29-MAR-2006 06:18 CHK	43.1000
30-MAR-2006 05:08 CHK	41.8000
31-MAR-2006 04:58 CHK	41.9000
3-APR-2006 04:54 CHK	42.1000
4-APR-2006 05:02 CHK	41.7000
Overlite A common on Martin Tant Fall Dans	(1) D 2

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
5-APR-2006 05:32		41.6000		
6-APR-2006 05:49	_	42.1000		
7-APR-2006 07:11	CHK	42.1000		
8-APR-2006 07:49	CHK	42.3000		
9-APR-2006 07:52	CHK	42.7000		
10-APR-2006 05:13	CHK	42.4000		

11-APR-2006 06:28 CHK	41.6000	
12-APR-2006 06:20 CHK	41.1000	111

-- Multi-Test Full Report --

Description : Quad10C (Hex 3) alpha %Eff

Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 44.900002 Upper Bound : 49.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 46.962921 Std Deviation : 0.670843

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:04	CHK	46.8000		
2-MAR-2006 06:04	-	47.0000	1 1 1	
3-MAR-2006 06:05		46.9000	1 1 1	
4-MAR-2006 06:22	-	46.5000	1 1 1	
5-MAR-2006 09:18			1 1 1	
	_	47.5000	1 ()	
6-MAR-2006 05:06	_	46.7000	, , ,	
7-MAR-2006 05:11	_	46.3000	1 1 1	
8-MAR-2006 05:44		47.3000	1 1 1	
9-MAR-2006 05:40	-	47.7000	1 1 1	
10-MAR-2006 05:46	CHK	1.2000	Be Ac	R
10-MAR-2006 06:30	CHK	47.2000)	
11-MAR-2006 07:49	CHK	47.5000)	
12-MAR-2006 07:33	CHK	47.6000		
13-MAR-2006 05:13	CHK	46.4000) <u>į į į</u>	
14-MAR-2006 04:59	CHK	46.6000		
15-MAR-2006 06:14	CHK	47,2000	iii	
16-MAR-2006 06:18	CHK	47.9000	iii	
17-MAR-2006 06:23	CHK	47.3000		
18-MAR-2006 07:00	CHK	46.8000		
19-MAR-2006 07:00	_	47.3000	1 1 1	
20-MAR-2006 05:03	-	47.4000		
21-MAR-2006 05:00		46.4000	1 1 1	
22-MAR-2006 05:44		46.9000		
23-MAR-2006 05:41	CHK	46.9000	'	

file:///P/Transfer/qa1_gpc10_26-may-2006-11372205.txt	
24-MAR-2006 05:07 CHK 47.1000	
25-MAR-2006 06:59 CHK 46.7000	
26-MAR-2006 07:20 CHK 47.0000	
27-MAR-2006 05:06 CHK 47.7000	
28-MAR-2006 06:06 CHK 46.1000	
29-MAR-2006 06:18 CHK 47.7000	
Quality Assurance Multi-Test Full Report (continued) Page : 4	
Measurement Time Sample ID Sample Analyst Value LU SD UD BS R	lej
30-MAR-2006 05:08 CHK 46.6000	
31-MAR-2006 04:58 CHK 47.6000	
3-APR-2006 04:54 CHK 46.6000	
4-APR-2006 05:02 CHK 47.3000	
5-APR-2006 05:32 CHK 46.9000	
6-APR-2006 05:49 CHK 46.9000	
7-APR-2006 07:11 CHK 47.2000	
8-APR-2006 07:49 CHK 47.2000	
9-APR-2006 07:52 CHK 47.6000	
10-APR-2006 05:13 CHK 47.8000	
11-APR-2006 06:28 CHK 47.4000	
12-APR-2006 06:20 CHK 47.1000	
Multi-Test Full Report	
Description : Quad10D (Hex 4) alpha %Eff	
Parameter Units : Parameter Type : Generic	
Tarameter Type . Generic	
Lower/Upper Bounds Test Parameters	
Lower Bound : 46.299999 Upper Bound : 50.000000	
Investigate Level: 2.000000 Action Level: 3.000000	
Sample Driven N-Sigma Test Parameters	
Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00	
Mean : 48.150002 Std Deviation : 0.600698	
Measurement Time Sample ID Sample Analyst Value LU SD UD BS R	.ej
1-MAR-2006 05:04 CHK 48.0000	
2-MAR-2006 06:04 CHK 48.4000	
3-MAR-2006 06:05 CHK 48.4000	

47.9000 | | |

4-MAR-2006 06:22 CHK

5-MAR-2006 09:18	CHK	47.6000
6-MAR-2006 05:06	CHK	48.0000
7-MAR-2006 05:11	CHK	48.6000
8-MAR-2006 05:44	CHK	48.5000
9-MAR-2006 05:40	CHK	48.7000
10-MAR-2006 05:46	CHK	1.2000 Be Ac R
10-MAR-2006 06:30	CHK	48.3000
11-MAR-2006 07:49	CHK	47.9000
12-MAR-2006 07:33	CHK	48.4000
13-MAR-2006 05:13	CHK	48.6000
14-MAR-2006 04:59	CHK	48.5000
15-MAR-2006 06:14	CHK	48.4000
16-MAR-2006 06:18	CHK	48.2000
17-MAR-2006 06:23	CHK	48.2000
18-MAR-2006 07:00	CHK	48.1000
19-MAR-2006 07:00	CHK	48.6000
20-MAR-2006 05:03	CHK	47.9000
21-MAR-2006 05:00	CHK	47.9000
22-MAR-2006 05:44	CHK	48.4000
23-MAR-2006 05:41	CHK	47.9000
24-MAR-2006 05:07	CHK	48.0000
25-MAR-2006 06:59	CHK	47.9000
Quality Assurance Mu	ulti-Test Full Report (cont	inued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

26-MAR-2006 07:20 CHK	48.6000
27-MAR-2006 05:06 CHK	48.3000
28-MAR-2006 06:06 CHK	48.7000
29-MAR-2006 06:18 CHK	48.8000
30-MAR-2006 05:08 CHK	48.1000
31-MAR-2006 04:58 CHK	48.1000
3-APR-2006 04:54 CHK	48.2000]
4-APR-2006 05:02 CHK	48.6000
5-APR-2006 05:32 CHK	48.5000
6-APR-2006 05:49 CHK	47.8000
7-APR-2006 07:11 CHK	48.7000
8-APR-2006 07:49 CHK	48.5000
9-APR-2006 07:52 CHK	47.9000
10-APR-2006 05:13 CHK	48.3000
11-APR-2006 06:28 CHK	48.6000
12-APR-2006 06:20 CHK	47.9000

-- Multi-Test Full Report --

Description : Quad10E (Hex 5) alpha %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 44.799999 Upper Bound : 48.599998

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 46.425556 Std Deviation : 0.531481

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:04	СНК	46.5000		
2-MAR-2006 06:04	CHK	46.4000	iii	
3-MAR-2006 06:05	CHK	46.4000	iii	
4-MAR-2006 06:22	CHK	46.5000	111	
5-MAR-2006 09:18	CHK	46.3000	ÌÌÌ	
6-MAR-2006 05:06	CHK	46.4000	ÌÌÌ	
7-MAR-2006 05:11	CHK	46.6000		
8-MAR-2006 05:44	CHK	46.6000		
9-MAR-2006 05:40	CHK	45.8000		
10-MAR-2006 05:46	CHK	1.1000	Be Ac	R
10-MAR-2006-06:30	CHK	46.1000)	
11-MAR-2006 07:49	CHK	46.1000		
12-MAR-2006 07:33	CHK	46.6000		
13-MAR-2006 05:13	CHK	46.2000		
14-MAR-2006 04:59	CHK	46.6000		
15-MAR-2006 06:14	CHK	45.9000		
16-MAR-2006 06:18	CHK	47.1000		
17-MAR-2006 06:23	CHK	46.3000		
18-MAR-2006 07:00	CHK	46.4000		
19-MAR-2006 07:00	CHK	46.3000		
20-MAR-2006 05:03	CHK	46.0000		
21-MAR-2006 05:00	CHK	46.1000		
Quality Assurance M	ulti-Test Full F	Report (continued)	I	Page: 6

23-MAR-2006 05:41 CHK	46.6000
24-MAR-2006 05:07 CHK	46.0000
25-MAR-2006 06:59 CHK	47.1000
26-MAR-2006 07:20 CHK	46.3000
27-MAR-2006 05:06 CHK	46.8000
28-MAR-2006 06:06 CHK	46.9000
29-MAR-2006 06:18 CHK	46.9000
30-MAR-2006 05:08 CHK	46.0000
31-MAR-2006 04:58 CHK	45.4000
3-APR-2006 04:54 CHK	46.5000
4-APR-2006 05:02 CHK	46.1000
5-APR-2006 05:32 CHK	46.5000
6-APR-2006 05:49 CHK	46.8000
7-APR-2006 07:11 CHK	46.5000
8-APR-2006 07:49 CHK	46.2000
9-APR-2006 07:52 CHK	46.2000
10-APR-2006 05:13 CHK	47.1000
11-APR-2006 06:28 CHK	46.5000
12-APR-2006 06:20 CHK	46.6000

-- Multi-Test Full Report --

Description : Quad10F (Hex 6) alpha %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 46.700001 Upper Bound : 50.099998

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 10-JAN-2006 00:00 End Date : 1-MAR-2006 00:00

Mean : 48.417023 Std Deviation : 0.513860

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:04 2-MAR-2006 06:04 3-MAR-2006 06:05 4-MAR-2006 06:22 5-MAR-2006 09:18 6-MAR-2006 05:06 7-MAR-2006 05:11	CHK CHK CHK CHK	48.9000 48.9000 48.3000 48.3000 48.3000 48.7000 48.4000		 -

8-MAR-2006 05:44	CHK	48.0000	
9-MAR-2006 05:40	CHK	48.5000	
10-MAR-2006 05:46	CHK	1.2000 Be Ac R	
10-MAR-2006 06:30	CHK	48.3000	
11-MAR-2006 07:49	CHK	48.5000	
12-MAR-2006 07:33	CHK	48.2000	
13-MAR-2006 05:13	CHK	48.4000	
14-MAR-2006 04:59	CHK	48.8000	
15-MAR-2006 06:14	CHK	48.2000	
16-MAR-2006 06:18	CHK	48.1000	
17-MAR-2006 06:23	CHK	48.6000	
O1:4 A M	14: Tout Fall Danast Count	:1\ D	-

Quality Assurance Multi-Test Full Report (continued) Page: 7

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
18-MAR-2006 07:00	CHK	48.3000)	
19-MAR-2006 07:00	CHK	48.6000)	
20-MAR-2006 05:03	CHK	49.0000)	
21-MAR-2006 05:00	CHK	48.5000)	
22-MAR-2006 05:44	CHK	48.1000)	
23-MAR-2006 05:41	CHK	48.6000		
24-MAR-2006 05:07	CHK	48.5000		
25-MAR-2006 06:59	CHK	48.5000		
26-MAR-2006 07:20	CHK	48.6000) iii	
27-MAR-2006 05:06	CHK	48.7000) iii	
28-MAR-2006 06:06	CHK	48.1000		
29-MAR-2006 06:18	CHK	49.5000] [In]	
30-MAR-2006 05:08	CHK	48.4000		•
31-MAR-2006 04:58	CHK	48.7000		
3-APR-2006 04:54 (CHK	48.2000		
4-APR-2006 05:02 (CHK	48.4000	iii	
5-APR-2006 05:32 (CHK	48.5000	iii	
6-APR-2006 05:49 (CHK	48.9000	iii	
7-APR-2006 07:11 (CHK	48.3000	iii	
8-APR-2006 07:49 (CHK	48.3000	iii	
9-APR-2006 07:52 (CHK	48.5000	iii	
10-APR-2006 05:13	CHK	48.3000		
11-APR-2006 06:28	CHK	48.2000		
12-APR-2006 06:20	CHK	48.8000	İİİ	

BETA SAMPLE AND QC DATA

SEVERN STL

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

4/10/2006 11:37:36 AM

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6060339; RBETA-SR Beta by GPC-Sr/Y

SD	G, Matrix:	31025; FILTER			
1.0 1.1	COC Is the ICOC page complete	; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 2.1	QC Batch Do the Summary/Detailed F	Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for	the analysis included in the batch?	Yes	No	N/A
2.3	is the Analytical Batch Wor	ksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets inclu	de a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples is the blank results, yield, a	and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and	MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yie	elds, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yie	lds, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and f	MDAs within contract limits?	Yes	Νo	N/A
4.0 4.1	Raw Data Were results calculated in t	he correct units?	Yes	No	N/A
4.2	Were analysis volumes ent	ered correctly?	Yes	No	N/A
4.3	Were Yields entered correct	itly?	Yes	No	N/A
4.4	Were spectra reviewed/med	et contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed	for anomalies?	Yes	No	N/A
	Other Are all nonconformances in	cluded and noted?	Yes	No	N/A
5.2	Are all required forms filled	out?	Yes	No	N/A
5.3	Was the correct methodolog	gy used?	Yes	No	N/A
5.4	Was transcription checked?		Yes	No	N/A
5.5	Were all calculations check	ed at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries com	plete and correct?	Yeş	No	N/A
6.0	Comments on any No response NCM. / 0.07 S	Pose:	· v .		

First Level Review

Jam anderson

Date 4-10.06

STL Richland

Page 1

1034



Data Review Checklist RADIOCHEMISTRY Second Level Review

Review Item	Yes (V)	No (√)	N/A (√)
A. Sample Analysis	T		
A. Sample Analysis 1. Are the sample yields within acceptance criteria?		}	1 1
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?		İ	
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample	{	1	
result < the Contract Detection Limit?	ļ		
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection		ĺ	
Limit?	ļ		
8. Do the MS/MSD results and yields meet acceptance criteria?	<u> </u>		
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
Are all Nonconformances included and noted?			
2. Are all required forms filled out?	 		
3. Was the correct methodology used?	 		
4. Was transcription checked?	 	_	
5. Were all calculations checked at a minimum frequency?	1		
6. Were units checked?		!	
Comments on any "No" response: See Non	/		
<u> </u>			
		*	

H/6/2006 10:44:18 AM Sample Preparation/Analysis Balance Id:1120373922 ☎36403, Brown and Caldwell Brown & BD Gross Beta PrpRC5016/5014 Pipet #: Caldwell 1 S8 Gross Beta by GPC using Sr/Y-90 curve Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060339 FILTER pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: HansenM Initial Aliquot Work Order, Lot, Total Amt Adj Aliq Amt Total QC Tracer Count On | Off Count Detector CR Analyst, Comments: Amt/Unit (Un-Acidified) Sample Date /Unit Acidified/Unit Prep Date Time Min ld (24hr) Circle Init/Date 1 HX81N-1-AF 0.833sa 503.56sa 0.0828q 🗸 50.04a.in J6B270158-1-SAMP 02/05/2006 06:00 AmtRec: FOLDER #Containers: 1 Scr. Alpha: Beta: 2 HX81Q-1-AF 0.833sa 501.73sa 50.08g.in 0.0831a J6B270158-2-SAMP 02/05/2006 06:35 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 3 HX81R-1-AF 500.94sa 0.833sa 50.03a.in 0.0832aJ6B270158-3-SAMP ¥02/05/2006 07:15 AmtRec: FOLDER #Containers: Scr: Alpha: Beta: 4 HX81T-1-AF 0.833sa 508.67sa 50.10g,in 0.082aJ6B270158-4-SAMP 02/05/2006 07:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 5 HX81V-1-AF 0.833sa 501.14sa 50.00g,in 0.0831g J6B270158-5-SAMP 02/05/2006 08:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 6 HX81W-1-AF 0.833sa 500.55sa 50.13g.in 0.0834g J6B270158-6-SAMP 02/05/2006 08:40 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 7 HX81X-1-AF 0.833sa 500.96sa 50.35q.in 0.0837qJ6B270158-7-SAMP AmtRec: FOI DFR #Containers: 1 Scr Aipha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 ICOC v4.8.20 pd - Prep Dt, ir - Reference Dt, ec-Enrichment Cell, et-Cocktailed Added Richland Wa.

14/6/2006 10:44:18 AM Sample Preparation/Analysis Balance Id:1120373922 ±536403. Brown and Caldwell , Brown & BD Gross Beta PrpRC5016/5014 | Caldwell Pipet #: S8 Gross Beta by GPC using Sr/Y-90 curve Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060339 FILTER pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: TSEQ Batch, Test: None Prep Tech: HansenM Work Order, Lot, Total Amt Total Initial Aliquot Adj Aliq Amt QC Tracer Detector Count On | Off CR Analyst, Comments: Sample Date /Unit Acidified/Unit Amt/Unit (Un-Acidified) Prep Date Time Min lď (24hr) Circle Init/Date 8 HX811-1-AF 0.833sa 501.81sa 50.63g,in 0.084gJ6B270158-8-SAMP 02/05/2006 06:15 AmitRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 9 HX812-1-AF 0.833sa 507.36sa 50.52g,in 0.0829g J6B270158-9-SAMP AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 10HX813-1-AF 0.833sa 500.90sa 50.31g,in 0.0837q6B270158-10-SAMP 02/05/2006 06:40 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 1111X814-1-AF 0.833sa 502.44sa 50.17g,in 0.0832qJ6B270158-11-SAMP 02/05/2006 07:20 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 12HX815-1-AF 0.833sa 501.00sa 50.26g in 0.0836q J6B270158-12-SAMP 02/05/2006 07:50 AmtRec: FOLDER #Containers: 1 Scr: Alpha Beta; 13HX816-1-AF 0.833sa 505.04sa 0.083q 50.32g,in J6B270158-13-SAMP 02/05/2006 08:20 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 14HX817-1-AF 0.833sa 501.67sa 50.49g,in 0.0838g J6B270158-14-SAMP 02/05/2006 08:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis WO Cnt: 14 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa. ICOC v4.8.20

### Architecture	Α	S8 Gr 01 ST ampl	ross Beta PrpR ross Beta by G FANDARD TES	PC using Sr/Y-90 T SET PM, Quote: EJ Amt QC Trac prep D	curve 63174 er Coun ate Time M	11	Pipe Sep1 DT/Tm Te Sep2 DT/Tm Te		Comments Beta:
Report Due: 03/31/2006 Batch: 6060339 FILTER SEQ Batch, Test: None Work Order, Lot, Sample Date /Unit SHX818-1-AF 0.833sa J6B270158-15-SAMP 02/05/2006 06:45 6H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 7H0EQR-1-AC-C J6C010000-339-LCS BH0EQR-2-AC-C J6C010000-339-LCS	Total Acidified/Unit 501.09sa	Initial Aliq Amt/Un 50.81g,in AmtRec: FOLDER 1.00sa,in	uot Adj Alicit (Un-Aci Un-Aci uote: EJ Amt QC Trac Prep D St. 1 BESB275	er Countaite Time M	t Detector lin Id	Sep1 DT/Tm Te Sep2 DT/Tm Te Prep Te Count On † Off (24hr) Circle Alpha:	ech: ech: HansenM	Beta:	
Batch: 6060339 FILTER EQ Batch, Test: None Work Order, Lot, Sample Date Work Order, Lot, Yunit 15HX818-1-AF 0.833sa J6B270158-15-SAMP 02/05/2006 06:45 I6H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 I7H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 BH0EQR-2-AC-C J6C010000-339-LCS	Total Acidified/Unit 501.09sa	Initial Aliq Amt/Un 50.81g,in AmtRec: FOLDER 1.00sa,in	uot Adj Alic it (Un-Ac 0.0845g #Container 1.00sa	PM, Quote: EJ Amt QC Trac Prep D St. 1 BESB275	er Coun ate Time M	t Detector lin Id	Sep2 DT/Tm Te Prep Te Count On Off (24hr) Circle Alpha:	ech: HansenM	Beta:
Work Order, Lot, Sample Date /Unit /	Total Acidified/Unit 501.09sa	Initial Aliq Amt/Un 50.81g,in AmtRec: FOLDER 1.00sa,in	#Containers: 1	Amt QC Trac Prep D	er Coun ate Time M	t Detector lin Id	Prep Te Count On † Off (24hr) Circle Alpha:	CR Analyst,	Beta:
Sample Date /Unit 15HX818-1-AF 0.833sa J6B270158-15-SAMP 02/05/2006 06:45 16H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 18H0EQR-2-AC-C J6C010000-339-LCS	Acidified/Unit 501.09sa	Amt/Un 50.81g,in AmtRec: FOLDER 1.00sa,in	#Containers: 1	Amt QC Trac Prep D	er Coun ate Time M	t Detector lin Id	Count On † Off (24hr) Circle Alpha:	CR Analyst,	Beta:
Sample Date /Unit 15HX818-1-AF 0.833sa J6B270158-15-SAMP 02/05/2006 06:45 16H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS 18H0EQR-2-AC-C J6C010000-339-LCS	Acidified/Unit 501.09sa	Amt/Un 50.81g,in AmtRec: FOLDER 1.00sa,in	#Containers: 1	Amt QC Trac Prep D	er Coun ate Time M	t Detector lin Id	(24hr) Circle Alpha:		Beta:
J6B270158-15-SAMP 02/05/2006 06:45 J6H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 J7H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 BH0EQR-2-AC-C J6C010000-339-LCS	A	AmtRec: FOLDER 1.00sa,in AmtRec:	#Container 1.00sa #Containers: 1	BESB275	7				
02/05/2006 06:45 16H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 18H0EQR-2-AC-C J6C010000-339-LCS	Α	1.00sa,in	1.00sa #Containers: 1	BESB275	7				
02/05/2006 06:45 16H0EQR-1-AA-B J6C010000-339-BLK 02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS 18H0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00	Α	1.00sa,in	1.00sa #Containers: 1	BESB275	7				
J6C010000-339-BLK 02/05/2006 06:00 J7H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 BH0EQR-2-AC-C J6C010000-339-LCS		AmtRec:	1.00sa #Containers: 1	BESB275	7				
02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS 02/05/2006 06:00 18H0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00		AmtRec:	#Containers: 1		7	Scr:	Alpha:	••••	
02/05/2006 06:00 17H0EQR-1-AC-C J6C010000-339-LCS D2/05/2006 06:00 18H0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00					7	Scr:	Alpha:	*****	
17H0EQR-1-AC-C J6C010000-339-LCS D2/05/2006 06:00 BH0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00					7	Scr:	Alpna:		
J6C010000-339-LCS D2/05/2006 06:00 BH0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00	A	1.0036,111	1.003a		1				Beta:
02/05/2006 06:00 8H0EQR-2-AC-C J6C010000-339-LCS 02/05/2006 06:00	A			02/30/00,	bd				
02/05/2006 06:00 BH0EQR-2-AC-C JGC010000-339-LCS 02/05/2006 06:00	A			12/28/05	<u></u>				
J6C010000-339-LCS		AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:
02/05/2006 D6:00			ISA	BESB	C. 2 mg	Storn 14 000	001-	1336	4/1/
02/05/2006 06:00				2757	· · · · · · · · · · · · ·	150mil	200	1000	7/6/0
Comments:	Α	AmtRec:	#Containers: 1	***		Scr:	Alpha:		Beta:
11 Clients for Batch: 536403, Brown and Caldwell	1		Brown & Cald	well	, EJ , 63	174			·····
X81N1AF-SAMP Constituent List	 E :			mar A.					
BETA RDL:5	pCi/sam LCI	L: UCI	L: RPD	:					
OEQR1AA-BLK: BETA RDL:5 OEQR1AC-LCS:	pCi/sam LCI	L: UCI	L: RPD	:					
Cs-137 RDL: Sr-90 RDL:			L:130 RPD L:130 RPD		7DA RDL:	pCi/	sam LCL:70	UCL:130 R.	PD:20
HOEQR2AC-LCS:									

Clouseau **Nonconformance Memo**



NCM #: 10-07850

NCM Initiated By: Pam Anderson Date Opened: 04/10/2006

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: Beta by GPC-Sr/Y

Lot #'s (Sample #'s): J6B270158

(1,10,11,12,13,14,15,2,3,4,5,

6.7,8,9),

QC Batches: 6060339

Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)

Problem Description / Root Cause

<u>Name</u> Pam Anderson

Date 04/10/2006 Description

The first count of the LCS had a 71% recovery. It was recounted with a 79%

recovery. Data will be accepted. The difference is considered counting statistics.

Corrective Action

Name Pam Anderson

Date 04/10/2006 **Corrective Action**

The LCS was recounted.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

<u>Status</u>

Notes

This section not yet completed by QA.

Approval History

Date Approved

Approved By

Position

Date Printed: 4/10/2006

STL RICHLAND 1039 4/10/2006 11:30:43 AM

ICOC Fraction Transfer/Status Report ByDate: 4/10/2005, 4/15/2006, Batch: '6060339', User: *ALL Order By DateTimeAccepting

Batch Worl	k Ord CurStat	tus A	ccepting		Comments
6060339					
4 <i>C</i>	CalcC	HansenM	3/20/2006 4:07	:38 PM	
SC .		wagarr	IsBatched	3/1/2006 4:16:24 PM	ICOC_RADCALC v4.8.18
C		HansenM	InPrep2	3/20/2006 4:07:38 PM	RICH-RC-5016 REVISION 5
C		ScottM	InPrep2	3/31/2006 7:28:41 AM	RICH-RC-5014 REVISION 6
C		HansenM	Prep2C	4/4/2006 5:03:06 PM	RICH-RC-5014 REVISION 6
C		DAWKINSO	InCnt1	4/4/2006 5:34:42 PM	RICH-RD-0003 REVISION 4
C		StringerR	CalcC	4/5/2006 2:09:43 PM	RICH-RD-0003 REVISION 4
C		StringerR	InCnt1	4/6/2006 11:01:50 AM	RICH-RD-0003 REVISION 4
C		DAWKINSO	CalcC	4/6/2006 7:33:13 PM	RICH-RD-0003 REVISION 4
C		ScottM	3/31/2006 7:28:	:41	
c		HansenM	4/4/2006 5:03:0	06 PM	
c		DAWKINSO	4/4/2006 5:34:4	2 PM	
С		StringerR	4/5/2006 2:09:4	13 PM	
C		StringerR	4/6/2006 11:01:	:50	
c		DAWKINSO	4/6/2006 7:33:1	3 PM	

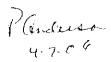
AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa. STL RICHLAND

4/10/2006 11	:30:42 AM	Rpt DB Transfei	r log (Batch Resi		SEVERN TRENT	STL
SDG or Batch	Rpt Db Id	LotSample Client Id	Matrix		Sample Date Units Expected	Yield Vo	lumes
Isotope 31025	Method BTst Q 9HX81110	c Analysis Date Result J6B2701588 P 0517	AIR	2/27/2006 8:00:00	2/5/2006 6:15:00 AM		
BETA	BDS8 0	4/5/2006 10:15:47 AM 1.5137E+00	1.293E+00	1.298E+00 5.298E+00	PCI/SA 1	.0 1.0E+0	3.405E-2
31025	9HX81210	J6B2701589 000357	AIR	2/27/2006 8:00:00	2/5/2006 6:05:00 AM	М	
BETA	BDS8 0	4/5/2006 10:15:47 AM 1.7618E+01	1.728E+00	2.098E+00 5.209E+00	PCI/SA 1	.0 1.0E+0	3.295E-2
31025	9HX81310	J6B27015810 000358	AIR	2/27/2006 8:00:00	2/5/2006 6:40:00 Af	М	
BETA	BDS8 0	4/5/2006 10:15:50 AM 1.6272E+01	1,704E+00	2.031E+00 5.341E+00	PCI/SA 1	.0 1.0E+0	3.367E-2
31025	9HX81410	J6B27015811 000359	AIR	2/27/2006 8:00:00	2/5/2006 7:20:00 Al	√1	
BETA	BDS8 0	4/5/2006 10:15:50 AM 1.8892E+01	1.608E+00	2.503E+00 4.713E+00		.0 1.0E+0	3.318E-2
31025	9HX81510	J6B27015812 000360	AIR	2/27/2006 8:00:00	2/5/2006 7:50:00 Al		
BETA	BDS8 0	4/5/2006 10:15:50 AM 2:5147E+01	1.852E+00	2.52E+00 5.06E+00		.0 1.0E+0	3.357E-2
31025	9HX81610	J6B27015813 000361	AIR	2/27/2006 8:00:00	2/5/2006 8:20:00 Al	٧f	
BETA	BDS8 0	4/5/2006 10:15:50 AM 2.4664E+01	1.871E+00	2.53E+00 5.184E+00		.0 1.0E+0	3.3E-2
31025	9HX81710	J6B27015814 000362	AIR	2/27/2006 8:00:00	2/5/2006 8:45:00 Al	И	
BETA	BDS8 0	4/5/2006 11:54:24 AM 2.4118E+01	1.885E+00	2.509E+00 5.291E+00		.0 1.0E+0	3.384E-2
31025	9HX81810	J6B27015815 000363	AIR	2/27/2006 8:00:00	2/5/2006 6:45:00 Al		
BETA	BDS8 0	4/5/2006 11:54:24 AM -1.2859E+00	1.219E+00	1.222E+00 5.36E+00	. 5.10,1	.0 1.0E+0	3.447E-2
31025	9HX81N10	J6B2701581 P 0510	AIR	2/27/2006 8:00:00	2/5/2006 6:00:00 A	М	
BETA	BDS8 0	4/5/2006 9:14:39 AM 1.3188E+01	1.644E+00	1.89E+00 5.408E+00		.0 1.0E+0	3.278E-2
31025	9HX81Q10	J6B2701582 P 0511	AIR	2/27/2006 8:00:00	2/5/2006 6:35:00 A	М	
BETA	BDS8 0	4/5/2006 9:14:39 AM 1.1516E+01	1.524E+00	1.81E+00 5.034E+00	PCI/SA 1	.0 1.0E+0	3.315E-2
31025	9HX81R10	J6B2701583 P 0512	AIR	2/27/2006 8:00:00	2/5/2006 7:15:00 Al	М	
BETA	BDS8 0	4/5/2006 9:14:39 AM 1.3284E+01	1.666E+00	1.895E+00 5.53E+00		0+30. O.I	3.319E-2
31025	9HX81T10	J6B2701584 P 0513	AIR	2/27/2006 8:00:00	2/5/2006 7:45:00 A		
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.9108E+01	1.8E+00	2.227E+00 5.406E+00		.00E+O	3.204E-2
31025	9HX81V10	J6B2701585 P 0514	AIR	2/27/2006 8:00:00	2/5/2006 8:15:00 A		
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.6437E+01	1.736E+00	2.071E+00 5.472E+00	PCI/SA 1	1.0E+0	3.311E-2
31025	9HX81W10	J6B2701586 P 0515	AIR	2/27/2006 8:00:00	2/5/2006 8:40:00 A		
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.3832E+01	1.591E+00	2.017E+00 5.064E+00	PCI/SA 1	1.0E+0	3.342E-2
31025	9HX81X10	J6B2701587 P 0516	AIR	2/27/2006 8:00:00	2/5/2006 6:10:00 A		
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.3292E+01	1.748E+00	1.989E+00 5.916E+00		1,0 1.0F+0	3.372E-2
31025	H0EQR1AB	J6C010000339 INTRA-LAB BLA		2/27/2006 8:00:00	2/5/2006 6:00:00 A		
BETA	BDS8 0 B	4/5/2006 11:54:24 AM 2.2121E-01	1.064E-01	1.082E-01 4.228E-01	PCI/SA	1.0 1.0E+0	1.0E+0
31025	H0EQR2CS	J6C010000339 INTRA-LAB CHE		2/27/2006 8:00:00	2/5/2006 6:00:00 A		
BETA	BDS8 1 S	4/6/2006 12:21:44 PM 3.5647E+00	1.857E-01	3.094E-01 4.255E-01	PCI/SA 4.5286E+00	1.0E+0	1,0E+0

Batch	Nbr: 6	6060339	,	Alpha B	eta, Beta	by GPC-	Sr/Y , F	Results	4	/6/2006 6:16	:04 PM
					Sumr	nary Repo	ort				
Status	Meth	Matrix	Wrk Ord	Paramet	er Sa Act	Uncert Q	Units	Av ILcC	IDC	QC Yield	RYId
Beta b	y GP(C-Sr/Y	Ric	hland Star	idard Gross	Alpha/Beta W	o Blk Sub	t			
Calc	S8	AIR	HX81N1AF	BETA	1.32E+01	(1.89E+00)	PCI/SA	R 2.59E+00	5.41E+00	100%	
Calc	S8	AIR	HX81Q1AF	BETA	1.15E+01	(1.81E+00)	PCI/SA	R 2.41E+00	5.03E+00	100%	
Calc	S8	AIR	HX81R1AF	BETA	1.33E+01	(1.90E+00)	PCI/SA	R 2,66E+00	5.53E+00	100%	
Calc	S8	AlR	HX81T1AF	BETA :	1.91E+01	(2.23E+00)	PCI/SA	R 2.59E+00	5.41E+00	100%	
Calc	S8	AIR	HX81V1AF	BETA	1.64E+01	(2.07E+00)	PCI/SA	R 2.63E+00	5.47E+00	100%	
Calc	S8	AIR	HX81W1AF	BETA	1.38E+01	(2.02E+00)	PCI/SA	R 2.42E+00	5.06E+00	100%	
Calc	S8	AIR	HX81X1AF	BETA	1.33E+01	(1.99E+00)	PCI/SA	R 2.85E+00	5.92E+00	10 0 %	
Calc	S8	AIR	HX8111AF	BETA	1.51E+00	(1.30E+00) U	4 PCI/SA	R 2.53E+00	5.30E+00	100%	
Calc	S8	AIR	HX8121AF	BETA	1.76E+01	(2.10E+00)	PCI/SA	R 2.49E+00	5.21E+00	100%	
Calc	S8	AIR	HX8131AF	BETA	1.63E+01	(2.03E+00)	PCI/SA	R 2.56E+00	5.34E+00	100%	
Calc	S8	AIR	HX8141AF	BETA	1.89E+01	(2.50E+00)	PCI/SA	R 2.26E+00	4.71E+00	100%	
Calc	S8	AIR	HX8151AF	BETA	2.51E+01	(2.52E+00)	PCI/SA	R 2.42E+00	5. 0 6E+00	100%	
Calc	S8	AIR	HX8161AF	BETA	2.47E+01	(2.53E+00)	PCI/SA	R 2.48E+00	5.18E+00	100%	
Calc	S8	AIR	HX8171AF	BETA	2.41E+01	(2.51E+00)	PCI/SA	R 2.53E+00	5.29E+00	100%	
Calc	S 8	AIR	HX8181AF	BETA	-1.29E+00	(1.22E+00) U	PCI/SA	R 2.57E+00	5.36E+00	100%	
Calc	S8	AIR	H0EQR1AA	BETA	2.21E-01	(1.08E-01)	PCI/SA	R 2.02E-01	4.23E-01	B 100%	
Calc	S8	AIR	H0EQR1AC	BETA	3.26E+00	(2.93E-01)	PCI/SA	R 2.38E-01	4.95E-01	S 100%	71%
Calc	S8	AIR	H0EQR2AC	BETA	3.56E+00	(3.09E-01)	PCI/SA	R 2.04E-01	4.26E-01	S 100%	79%



^{() - (1}s Uncertainities) IDC - Instrument Delection Level in Conc Units MLcC- Method Decision Level in Conc Units MDC - Minimum Detectable Concentration 'Std - Lc, MDC using StdDev for Set of Blanks

O - Qualifier, U is Less Than Lc = 1 645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

04/05/06 10:29 BETA 343 610 GPC31A 1.5 N N 4.4013E-01 1.0000E+00 N 100% N 1.0000E+00 4.5045E-01 1.0000E+00	Ba	tch Nbr: 6	060339			А	lpha	Beta	, Be	ta b	y GPC	-Sr/Y , (Calcu	lated	Resu	ılts		4/6	J/2006 6:16	:05 PM
Cable Sample Cable Cable Sample Cable											etaile	d Repor	t							
1						t Wr	k Ord	Units/M	latrix C	C/BB	Sa/On Date	Analysis	ate/PptW	t Sep1/	Sep2 Date	QC/Trac	er Vial Mult/Ent	Yid Total/Anal	y Vol Final/0	Count Vol
04/05/06 029 BETA 343 610 GPC31A 1.5 N N 4.0/19E-01 1.0000E+00 N 100% N 1.0000E+00 4.5045E-01 1.0000E+00 5% (0.000E+00) 12.080612			AIR	*STLE					1	02/0	5/06 06:00		5 09:14	****	9.9-10	PESTA Mind and man man and a man	1			······································
04/05/06 10.29 BETA 343 510 GPC31A 1.5 N N A4/013E-01 1,0000E+00 N 1,0000E+00 1,2036E-01 1,0000E+00 1,0000E	Sq	Cnt Date	Paramete	r Sam	ple Cnt Bkgrr	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	! Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAc	i Decav	Abn
Sq	1 04	/05/06 10:29	9 BETA			G	GPC31A	1.5							N	and an extension with a subsequent was a server run.		4.5045E-01		
O4/05/06 BETA B 13.188273 1.06667E+00 2.423552 2.423552 2.00 Sa 100% 5.409349	Sq	Calc Date	Paramete	r Avg	Sa Act	Q	Net (Cnt Rt	•		•	'	•		Viold Enc	nt Cham Vi				
Sq Status Matrix Protocol Equation Set Wrk Ord Units/Matrix OC/58 Set/On Date AnalysisDate/Pptivt Sept/Sep2 Date OC/Tracer Vial Mult/Entity Total/Analy Vol Final/Count Special Speci		04/05/06	BETA	R		,			2.4235	52	2.4235	52	1.00) Sa		a Chem H	5.40834	9	MIDC StdDvl	MdC/LeC
2 Calc S8 AIR STLE GabWoBS HX81Q1AF PC/VS JOENS 1012 1 1 1.00 Sa 538403,P 0511	Sq Sta	tus Method	Matrix	Protoco	Equation Set	Wr	k Ord	Units/M	atrix C	C/BB :	Sa/On Date			, 	Sen2 Date	ОСЛизе				
Signature Sign	2 Cal	c S8	AIR	*STLF	GahWoBS	UY01	O18E								ocpr oak	QC/11ac	er vial MidiVEIII	rid rotat/Anar	y voi Final/(Count Vol
1 04/05/06 10:29 BETA 307 548 GPC31B 1.5 N N 4.4742E-01 1.0000E+00 N 100% N 1.0000E+00 4.5945E-01 1.0000E+00 12.027095	_	P 0511			,J6B2701s	8-2 v4.8.	21	AIR					5 09:14				1			
150 500 Y (2.469E-02) (0.000E+00) 5% (0.000E+00) 1.0000E+00 1.0000E	<u> </u>									Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	ingr Fct	Conv Fct/VolAd	ij Decay	Abn
Sq Calc Date Parameter Avg Sa Act Q Net Crit Rt Dpm Wo Bik Dpm-Bik Vol Used Yield,EnFct Chem Yid,EFctu IDC/ILcC BIkLoc/MDC StdDvMdc/L. 04/05/06 BETA R 11.515864 9.50667E-01 2.125637 2.125637 1.00 Sa 100% 5.033679 (1.809982) (1.2584E-01) (0.322865) (0.322865) (0.027064) 2.408845 Sq Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count 1 1.00 Sa 0.083194 S	04,	/05/06 10:29	BEIA			G	SPC31B	1.5							N				1.0000E+0	00
O4/05/06 BETA R 11.515864 9.50667E-01 2.125637 2.125637 1.00 Sa 100% 5.033679	Sa	Calc Date	Daramoto			•	N-4 6		-	•	,	•,	•				,			
(1.809982) (1.2584E-01) (0.322865) (0.322865) (0.027064) 2.408845 Sq. Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Count Vial Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mull/EntYld Total/Analy Vol Final/Count Vial Count	<u> </u>												Used		Yield,EnFe	t Chem Yie	d,EFctU IDC/ILct	BikLcC/	MDC StdDvl	MdC/LcC
3 Calc S8 AIR "STLE GabWoBS HX81R1AF PCI/SA 02/05/06 07:15 04/05/06 09:14 1 1.00 Sa 0.083194 Sa 0.083194 Sa 0.083194 Sa 0.083194 Sa 0.083194 Sa 0.0805/06 10:29 BETA 360 656 GPC31C 1.5 N N 4.4347E-01 1.0000E+00 N 100% N 1.0000E+00 4.5045E-01 1.0000E+00 Y (9.863E-03) (0.000E+00) 5% (0.000E+00) 12.020159 Sq Calc Date Parameter Avg Sa Act Q Net Cnt Rt Dpm Wo Bik Dpm-Bik Vol Used Yield,EnFct Chem Yid,EFctU IDC/ILcC BikLcC/MDC StdDvMdC/Lc 0.405/06 BETA R 13.283728 1.08800E+00 2.453371 2.453371 1.00 Sa 100% 5.530224 (1.895445) (1.3647E-01) (0.335742) (0.335742) (0.035742) (0.027064) 2.656399 Sq Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYid Total/Analy Vol Final/Count Vial Count No. 1.000 Sa 100% 5.530224 (1.895445) (1.3647E-01) QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYid Total/Analy Vol Final/Count Vial Calc S8 AIR "STLE GabWoBS HX81T1AF PCI/SA 02/05/06 07:45 04/05/06 09:14 1 1.00 Sa 10.00 Sa												051			100%					
Sq Cnt Date Parameter Sample Cnt Bkgrnd Cnt Instr Geom Trc/Av Ent Efficiency1 Efficiency2 Ent Yld Fct Ent Blk Value Ingr Fct Conv Fct/VolAdj Decay Alf	Sq Stat	tus Method	Matrix	Protocol	Equation Set	Wrl	k Ord	Units/M	atrix Q	C/BB S	Sa/On Date	AnalysisD	ate/PptWt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/Ent	/ld Total/Analy	/ Vol Final/C	Count Vol
Sq			AIR	*STLE	-					02/0	5/06 07:15		09:14				1			**************************************
1 04/05/06 10:29 BETA 360 656 GPC31C 1.5 N N 4.4347E-01 1.0000E+00 N 100% N 1.0000E+00 4.5045E-01 1.0000E+00	Sq	Cnt Date	Paramete	r Samp	ole Cnt Bkgrn	d Cnt	Instr	Geom	Trc/Av	Ent E	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct			Abn
Sq Calc Date Parameter Avg Sa Act Q Net Cnt Rt Dpm Wo Blk Dpm-Blk Vol Used Yield,EnFct Chem Yld,EFctU IDC/ILcC BlkLcC/MDC StdDvMdC/Lcc 04/05/06 BETA R 13.283728 1.08800E+00 2.453371 2.453371 1.00 Sa 100% 5.530224 (1.895445) (1.3647E-01) (0.335742) (0.335742) (0.027064) 2.656399 Sq Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count Vol 4 Calc S8 AIR *STLE GabWoBS HX81T1AF PCI/SA 02/05/06 07:45 04/05/06 09:14 1 1.00 Sa	04/	05/06 10 :29	BETA			G	PC31C	1.5									1.0000E+00	4.5045E-01		
04/05/06 BETA R 13.283728 1.08800E+00 2.453371 2.453371 1.00 Sa 100% 5.530224 (1.895445) (1.3647E-01) (0.335742) (0.027064) 2.656399 Sq Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count V 4 Calc S8 AIR *STLE GabWoBS HX81T1AF PCI/SA 02/05/06 07:45 04/05/06 09:14 1 1.00 Sa	Şq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt At	Dpm V		•	· ·			Yield EnFo	t Chem Vir			MDC CAND-A	
Sq Status Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDate/PptWt Sep1/Sep2 Date QC/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count V 4 Calc S8 AIR *STLE GabWoBS HX81T1AF PCI/SA 02/05/06 07:45 04/05/06 09:14 1 1.00 Sa 168270158.4 v4 8 21 AIR 100 Sa	(04/05/06	BETA								2.45337	1	1.00) Sa		011011111	5.530224	1	WIDC STODY	viac/Lec
4 Calc S8 AIR *STLE GabWoBS HX81T1AF PCI/SA 02/05/06 07:45 04/05/06 09:14 1 1.00 Sa	q Stat	us Method	Matrix			Wrl	·					, , , ,								-
536403,P 0513 JGB270158-4 v/4 8 21 AIR 1 1.00 Sa					-						avon Date	Anaiysisu	ate/Pptvvt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/Ent\	'ld Total/Analy	/ Vol Final/C	Count Vol
			AIH	*STLE						02/05	5/06 07:45		09:14			- - - - - - - - - - - - - -	1			
Sq Cnt Date Parameter Sample Cnt Bigrnd Cnt Instr Geom Trc/Av Ent Efficiency 2 Ent Vid Ect Ent Bik Voltage Instruction Community	Sq	Cnt Date	Parameter	Samp	e Cnt Bkgrn	d Cnt I	Instr	Geom	Trc/Av	Ent E	fficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct			Abn
04/05/06 10:29 BETA 395 569 GPC32A 1.5 N N 4.2966E-01 1.0000E+00 N 100% N 1.0000E+00 4.5045E-01 1.0000E+00	04/	05/06 10:29	BETA	395	569	G	PC32A	1.5	N	N 4.2	2966E-01	1.0000E+00	N	100%	N				-	and the second s
150 500 Y (1.033E-02) (0.000E+00) 5% (0.000E+00) 12.188588				150	500				Υ	(1.	033E-02)	(0.000E+00)								¥
() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 *TPU Page 1 IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time RecCnt:4 RADCALC v4.8.21 STL Richland	DC -Ins	strument Dete	ction Level in C	Cana Units	s MLcC - Metho	nd Decisio	on Level in	Conc Un	its, MD0	C- Minim	num Dataata	hia Canaa-tti-	on				Reco			

В	atch Nbr: 60	060339			Alpha	Beta	, Beta	by GPC	-Sr/Y , C	Calcul	ated	Resu	lts		4/6/20	06 6:16:0	5 PM
Sq	Calc Date	Parameter	Avg	Sa Act		Ont Rt	Dpm Wo	_		Used				d,EFctU IDC/ILcQ	BIKLeC/MDC	StdDvMd	dC/LcC
	04/05/06	BETA		19.107976 (2.226714)	1.4953 (1.408		3.480284 (0.38041		4.53	1.00 .027064)		100%	2 344	5.406397 2.589304			
Sq S	atus Method	Matrix	Protoco	Equation Set	Wrk Ord	Units/N	fatrix QC/	BB Sa/On Date	AnalysisD:	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/EntY	'ld Total/Analy Vo	1 Final/Co	unt Vo
	alc S8 3,P 0514	AIR	*STLE	GabWoBS ,J6B270158	HX81V1AF 8-5 v4.8.21	PCI/S/ AIR	4	02/05/06 08:15	04/05/06 04.2	09:14				1	1.00 Sa 0.083111 Sa		
Sq	Cnt Date	Parameter	Samp	le Cnt Bkgrno	d Cnt Instr	Geom	Trc/Av E	nt Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAdj D	lecay	Abn
1 0	4/05/06 10:29	BETA	386 150	623 500	GPC32B	1.5	N N Y	4.3767E-01 (1.064E-02)	1.0000E+00 (0.000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)		0000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q Net	Ont Rt	Dpm Wo	Blk Dpm-	Bik Vol	Used		Yield,EnFo	t Chem Yle	d,EFctU IDC/ILc0		StdDvMd	dC/LcC
_	04/05/06	ВЕТА		16.436874 (2.070971)	1.3273 (1.401		3.032694 (0.36192		661	1.00 (027064)		100%		5.471868 2.62563	}		
Sq Si	atus Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/N	fatrix QC/	BB Sa/On Date	AnalysisDa	ate/PptWt	Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	'Id Total/Analy Vo	I Final/Co	unt Vo
	alc \$8 3,P 0515	AIR	*STLE	GabWoBS ,J6B270156	HX81W1AF 8-6 v4.8.21	PCI/S/ AIR	4	02/05/06 08:40	04/05/06 03.8	09:14				1	1.00 Sa 0.083425 Sa		
Sq	Cnt Date	Parameter	Samp	ole Cnt Bkgrnd	d Cnt Instr	Geom	Trc/Av E	int Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj D	ecay	Abn
1 0	4/05/06 10:29	BETA	336 150	55 1 500	GPC32C	1.5	N N Y	4.4424E-01 (2.771E-02)	1.0000E+00 (0.000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)		0000E+00	
Sq	Calc Date	Parameter	Αvg	Sa Act	Q Net	Ont Rt	Dpm Wo	Blk Dpm-	Blk Vol	Used		Yield,EnFc	t Chem Yi	d,EFctU IDC/ILcC	BIKLeC/MDC	StdDvMd	dC/LcC
	04/05/06	BETA		13.83169 (2.016618)	1.1380 (1.309		2.561674 (0.35885			1.00 (027064)	Sa	100%		5.06389 2.423589)		
Sq Si	atus Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/N	latrix QC/	BB Sa/On Date	AnalysisDa	ite/PptWt	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/EntY	Id Total/Analy Vo	I Final/Co	unt Vo
	alc S8 I,P 0516	AIR	*STLE	GabWoBS ,J6B270158	HX81X1AF 8-7 v4.8.21	PCI/S/ AIR	4	02/05/06 06:10	04/05/06 01.8	09:14				1	1.00 Sa 0.083722 Sa		13- 14-111-18-1-1-1 -1-1-1-1-1-1-1-1-1-1-1-1-1
Sq	Cnt Date	Parameter	Samp	ole Cnt Bkgrnd	d Cnt Instr	Geom	Trc/Av E	int Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj D	ecay	Abn
1 0	4/05/06 10:29	ВЕТА	374 150	716 500	GPC32D	1.5	N N Y	4.2959E-01 (1.330E-02)	1.0000E+00 (0.000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)		0000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q Net	Cnt At	Dpm Wo	Blk Dpm-	Blk Vol	Used		Yield,EnFc	t Chem Yi	d,EFctU IDC/ILcC	BikLcC/MDC	StdDvMd	iC/LcC
	04/05/06	ВЕТА		13.29224 (1.988988)	1.0613 (1.395		2.470546 (0.35595			1,00 (027064)	Sa	100%		5,916438 2,846775			
Sq SI	atus Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/N	latrix QC/	BB Sa/On Date	AnalysisDa	ate/PptWt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/EntY	'Id Total/Analy Voi	i Final/Co	unt Vo
	alc S8 ,P 0517	AIR	*STLE	GabWoBS J6B270158	HX8111AF 8-8 v4.8.21	PCI/S/	1 (02/05/06 06:15	04/05/06 01.3	10:15				1	1.00 Sa 0.084045 Sa		
Sq	Cnt Date	Parameter	Samp	ele Cnt Bkgrnd	1 Cnt Instr	Geom	Trc/Av E	nt Efficiency1	Efficiency 2	Ent	Yid Fet	Ent	Blk Value	ingr Fct	Conv Fct/VoiAdj D	ecay	Abn
IDC -	Instrument Deta	ction Level in C	onc Unit	 MLcC - Metho 	Lc = 1.645 * TPU od Decision Level /90 and Y-90 Cou	in Conc U	nits, MDC-	Pag Minimum Detecta	ble Concentratio	n				RecC		CALC v4.8	8.21

Batch	Nbr: 60	60339	-test, blake a rite baker.		A	Jpha	Beta	. Beta	a b	y GPC-	Sr/Y . C	Calcu	lated	Resul	ts		4/6	5/2006 6:1	6:05 PM
1 04/05/0	06 11:30	BETA	180	541		GPC26C				.1779E-01	•		100%	N N		1.0000E+00			
			150	500				Y		1.032E-02) (5%	••		(0.000E+00)		1.0000	+00
Sq Cal	lc Date	Parameter	Αvg	Sa Act	Q	Net	Cnt Rt	Dpm W	o Bik	Dpm-B!	k Vo	Used		Yield,EnFct	Chem Yi	d,EFetU IDC/ILc0	BlkLcC	/MDC Stdf	OvMdC/LcC
04/0	5/06	BETA	R	1.513749	U4	1.1800		0.28243		0.282437		1.00		100%		5.298088			
				(1.297509)		(1.008	2E-01)	(0.2418	21)	(0.241821) (0	0.027064	,			2.534666			
Sq Status I	Method	Matrix I	Protoco	ol Equation Set	W	rk Ord	Units/N	fatrix Q0)/BB	Sa/On Date	AnalysisD	ate/PptWi	t Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	ld Total/Ana	ly Vol Fina	WCount Vo
9 Calc 536403,0003		ИR	*STLE	GabWoBS ,J6B27015		1 21AF 3.21	PCI/S/ AIR	4	02/0	05/06 06:05	04/05/06 02.7	10:15				1	1.00 0.082945		
Sq Cnt	t Date	Parameter	Sam	ple Cnt Bkgrn	d Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolA	dj Decay	Abn
1 04/05/0	06 11:30	BETA	366	529	-	GPC26E	1.5	N	N 4	.2600E-01	1.0000E+00	N	100%	N	######################################	1.0000E+00		1.0000E	+00
			150	500				Υ	(8.750E-03)	(0.000E+00))	5%			(0.000E+00)	12.056129		
Sq Cal	Ilc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm W	o Bli	Dpm-Bl	k Vo	l Used		Yleid,EnFc	Chem YI	d,EFctU_IDC/ILc0	BlkLcC	/MDC Stdt	DvMdC/LcC
04/0	05/06	BETA	R	17.617674			00E+00	3.24409		3.244099			0 Sa	100%		5.208723			_
	-		- Jan	(2.097848)			8E-01)	(0.3633		(0.363378).027064				2.490684			
Sq Status	Method	Matrix I	Protoco	ol Equation Set	W	rk Ord	Units/N	fatrix Q	C/BB	Sa/On Date	AnalysisD	ate/PptW	t Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	'Id Total/Ana	ily Vol Fina	al/Count Vo
10 Calc 536403,0003		ΝR	'STLE	GabWoBS ,J6B27015		131AF 1.8.21	PCI/S/ AIR	4	02/0	05/06 06:40	04/05/06 02.8	3 10 :15				1	1. 00 0.083666		
Sq Cnt	t Date	Parameter	Sam	ple Cnt Bkgrn	d Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolA	Adj Decay	Abn
1 04/05/0	06 11:30	BETA	382	608	1	GPC27	1.5	N			1.0000E+00	N	100%	N		1.0000 E +00		1.0000E	+00
			150	500				Υ	•	,	(0.000E+ 0 0)	,	5%			(0.000 E +00)			
·	Ic Date	Parameter			Q		Cnt Rt	Dpm W		<u> </u>	k Vo	Used		Yield,EnFc	Chem Y	id,EFctU IDC/iLc(BlkLc0	MDC Std	DvMdC/LcC
04/0	05/06	BETA	R	16.272015			67E+00 32E-01)	3.02233		3.022338 (0.356938	n		0 Sa	100%		5.340647			
				(2.031073)				_				0.027064			·····	2.561381			
Sq Status	Method	Matrix	Protoco	ol Equation Set	t W	rk Ord	Units/f	Aatrix Q	С/ВВ	Sa/On Date	AnalysisD	ate/PptW	t Sep1/	Sep2 Date	QC/Trac	er Vial Mult/Ent	/ld Total/Ana	ily Vot Fina	al/Count Vo
11 Calc 536403,0003		AIR	*STLE	GabWoBS ,J6B27015		141AF 1.8.21	PCI/S	A	02/0	05/06 07:20	04/05/06 03.0	10:15				1	1.00 0.083177		
Sq Cnt	t Date	Parameter	Sam	iple Cnt Bkgrn	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/Vol4	Adi Decay	Abr
1 04/05/0	06 11:30	ВЕТА	446	610		GPC27E	3 1.5	N	N 5	5.0261E-01	1.0000E+00	N	100%	N		1.0000E+00	4.5045E-01		
			150	500				Υ	(3.949E-02)	(0.000E+00)	5%			(0.000E+00)			
Sq Ca	ilc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm W	o Bii	c Dpm-Bl	k Vo	l Used		Yield,EnFc	t Chem Y	Id,EFctU IDC/ILct	BlkLcC	MDC Std	DvMdC/Lc0
	05/06	BETA	R	18.89193		1.753	33E+00	3.4884	67	3.488467		1.0	0 Sa	100%	-	4.713216	5		
04/0				(2.502549)		(1.492	21E-01)	(0.4400	85)	(0.440085	i) (6	0.027064	1)			2.260617	7		
04/0				(21002070)															
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Bat	tch Nbr: 60	060339			Δ	lpha	Beta	, Be	ta I	by GPC	-Sr/Y,	Calcu	lated	Resu	lts		4/6/	2006 6:16:0	05 PM
Sq Sta	tus Method	Matrix	Protoco	Equation S	et W	rk Ord	Units/M	atrix C)C/BE	Sa/On Date	Analysis	Date/PptW	t Sep1	Sep2 Date	QC/Trac	er Vial Mult/EntY	/Id Total/Analy	Vol Final/Co	ount Vo
12 Calo 536403,0		AIR	*STLE	GabWoBS ,J6B270	HX8 158-12 v4	1 51AF 8.21	PCI/SA AIR	\	02	/05/06 07:50	04/05/0 06.1	06 10:15				j	1.00 S 0.083566 S		
Sq	Cnt Date	Paramete	r Samı	ple Cnt Bkgi	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiencyl	Efficiency	2 Ent	YId Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAd	j Decay	Abn
1 04/	/05/06 11:30) BETA	481 150	560 500		GPC27C	1.5	N Y		4.4728E-01 (9.894E-03)	1.0000E+0	-	100% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Ont Rt	Dpm \	Wo B	lk Dpm-	Bik V	ol Used		Yield,EnFo	t Chem YI	d,EFctU IDC/ILc(MDC StdDvM	ldC/LcC
(04/05/06	BETA	R	25.147197 (2.520487)	-	2.0866 (1.536		4.6652 (0.427		4.66522 (0.4279		1.0	0 Sa	100%		5.060041 2.422595	I		
Sq Sta	tus Method	Matrix	Protoco	I Equation S	et W	rk Ord	Units/M	atrix C	C/BE	Sa/On Date	Analysis	Date/PptW	t Sep1	Sep2 Date	QC/Trac	er Vial Mult/Ent\	fld Total/Analy	Vol Final/Co	ount Vo
13 Cak 536403,0		AIR	*STLE	GabWoBS ,J6B270	HX8 158-13 v4	161AF .8.21	PCI/SA	\	02	/05/06 08:20	04/05/0 10.7	6 10:15	/ - manning			1	1.00 S 0.082997 S		
Sq	Cnt Date	Paramete	r Samı	ple Cnt Bkg	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency	2 Ent	Yld Fçt	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd		Abn
1 04/	/05/06 11:30	BETA	471 150	566 500		GPC27D	1,5	N Y		4.4186E-01 (1.118E-02)	1.0000E+0		100% 5%	N	····	1.0000E+00 (0.000E+00)		1.0000E+00)
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Cnt At	Dpm \		` '	•	ol Used		Yield,EnFo	t Chem YI	d,EFctU IDC/ILc0		MDC StdDvM	ldC/LcC
(04/05/06	BETA	R	24.664342 (2.530443)		2.0080 (1.523		4.5444 (0.428		4.54446 (0.42856		1.0	0 Sa -)	100%	11114.4.4	5.183681 2.482357			
Sq Sta	tus Method	Matrix	Protoco	Equation S	t W	rk Ord	Units/M	atrix C	IC/BE	Sa/On Date	Analysis	Date/PptW	t Sep1	Sep2 Date	QC/Trac	er Vial Mult/Ent\	/ld Total/Analy	Vol Final/Co	ount Vo
14 Calo 536403,0		AIR	*\$TLE	GabWoB\$,J6B270	HX8 : 158-14 v4	171AF .8.21	PCI/SA AIR	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	02	/05/06 08:45	04/05/0 02.8	06 11:54				1	1.00 S 0.083836 S		
Sq	Cnt Date	Paramete	r Sam	ple Cnt Bkgı	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency	2 Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
1 04/	/05/06 13:09	BETA	460 150	569 500		GPC32A	1.5	N Y		4.2966E-01 (1.033E-02)	1.0000E+0		100% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Cnt Rt	Dpm \	Wo B	lk Dpm-	BIK V	ol Used		Yield,EnFo	t Chem Yi	id,EFctU 1DC/ILc0	C BikLcC/N	MDC StdDvM	ldC/LcC
(04/05/06	BETA	R	24.118384 (2.50865)		1.9286		4.4888 (0.430		4.48883 (0.43023	·	1.0	0 Sa ·)	100%		5.290811 2.533946			
Sq Stat	tus Method	Matrix	Protoco	Equation S	et W	rk Ord	Units/M	atrix C	C/BE	Sa/On Date	Analysis	Date/PptW	t Sep1	Sep2 Date	QC/Trac	er Vial Mult/Ent\	/ld Total/Analy	Vol Final/Co	ount Vo
15 Calo 536403,0		AIR	*STLE	GabWoBS ,J6B270	HX8 ⁻ 158-15 v4	181AF .8.21	PCI/SA AIR	\	02	/05/06 06:45	04/05/0 01.5	6 11:54				1	1.00 S 0.084465 S		
Sq	Cnt Date	Paramete	r Sam	ple Cnt Bkgi	nd Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
1 04/	/05/06 13:09	BETA	171	623		GPC32B	1.5	N	N	4,3961E-01	1.0000E+0	0 N	100%	N		1.0000E+00	4.5045E-01	1.0000E+00)
			150	500				Υ		(1.068E-02)	(0.000E+00	0)	5%			(0.000E+00)	11,839178		
() - (1	s Uncertainitie	es), Q - Qualifi	er, U Res	ult is Less Tha	n Lo = 1.6	545 * TPU		<u> </u>		Page				<u>. , , , , , , , , , , , , , , , , , , ,</u>		Rec0	Ont:15 F	RADCALC v4.	.8.21
וו - טטו Sr-89 C	strument Dete Jounts are Der	ived from the C	conc Unit	is, MLcC - Mei on of Each Sr-	nod Decis 39/90 and	Son Level Y-90 Cou	n Conc Ur nt, All Res	nits, MD suft Digit:	rC-Mi s Maγ	inimum Detectal Not be Signific	bie Concentra ants, Date/Tir	tion ne - mm/da	Vyy hh;ma	ı, 24hr Time			S	TL Richland	

Ba	atch Nbr: 6	060339	-		ΑI	lpha	Reta	Bet	a hy	v GPC-	Sr/Y , C	`alcul	ated	Resu	lte		4/6/20	006 6:16:0	ne PM
	Calc Date	Parameter	Avg	Sa Act	ο	Net C		Dpm W	-		•	Used				d,EFatU IDC/iLaC		C StdDvMe	
	04/05/06	BETA		-1.28591		-1.0600		-0.2411		-0.24112		1.00			· Olem In	·	BIRLEC/IVID	C SIUDVIN	acilic
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Sq St	atus Method	Matrix		Equation Set	Wrl	k Ord				Sa/On Date	AnalysisD		Sep1/	Sep2 Date	QC/Trace	er Vial Mult/EntY	Id Total/Analy V	ol Final/Co	ount Vo
16 Ca	ılc S8	AIR	10T) =	GabWoBS			501/0		00:0	= (0.0.00			·						
i	A-LAB BLANK	AIR	SILE	J6C0100		RIAA	PCI/S/ AIR	4 8	02/0	5/06 06:00	04/05/06 00.1	11:54				1	1.00 Sa 1.00 Sa		
Sa	Cnt Date	Paramete	r Samı	ple Cnt Bkgrn	d Cnt	Instr	Geom	Trc/Av	Ent l	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	ingr Fct	Conv Fct/VolAdj	Docav	Abn
1 0-	4/05/06 13:09	BETA	198	551		PC32C				4391E-01	1.0000E+00		100%	N N	- CIR TUIDO	1.0000E+00	4.5045E-01 1		
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Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm W	o Blk	Dpm-E	3lk Vo	Used		Yield,EnFo	t Chem Yi	d,EFetU IDC/ILeC		C StdDvM	dC/LcC
ĺ	04/05/06	BETA	R	0.221211		2.1800	E-01	0.4910	9	0.49109		1.00	Sa	100%		0.422768			
				(0.108176)		(1.0490	E-01)	(0.2395	5 48)	(0.23954	.8) (0	.017321)				0.202338			
Sq St	atus Method	Matrix	Protoco	Equation Set	Wr	k Ord	Units/N	Aatrix Q	C/BB s	Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	ld Total/Analy V	ol Final/Co	ount Vo
17 Ca		AIR	*STLE	GabWoBS	HOEQ	R1AC	PCI/S	A S	02/0	5/06 06:00	04/05/06	11:54			BESB2	757 1	1.00 Sa		
O,INTR	A-LAB CHECK			,J6C0100	00-339		AIR				00.2				BE\$B2	2757 Alq	1.00 Sa		
Sq	Cnt Date	Paramete	r Sam	ple Cnt Bkgrn	d Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1 (0	4/05/06 13:09	BETA	682	716	G	PC32D	1.5	N		.3004E-01	1.0000E+00		100%	N			4.5045E-01 1	.0000E+00)
			150	500				Υ	•	I.332 E-02)	(0.000E+00)		5%			(0.000E+00)			
/ S q	Calc Date	Parameter		Sa Act	<u>Q</u>	Net C		Dpm V		·		l Used		•		d,EFctU IDC/ILcC	BIKLcC/MD	C StdDvM	dC/LcC
$V \in$	04/05/06	BETA	R	3.262462		3.1146 (1.8214		7.2426		7.242673 (0.60069		1.00 (1.017321)		100%	719	j			
Sa St	atus Method	Matrix	Drotoso	(0.293238) Equation Set	We	k Ord				Sa/On Date	Analysis			Sep2 Date		0.23809	T-A-1/6 1 1	-1 -51 - 110	
<u> </u>										· · · · · · · · · · · · · · · · · · ·	Analysisu	ale/Pptivi	Sepir	Sepz Date		er Vial Mult/EntY	id Total/Analy V	ol Final/Co	ount Vo
18 Ca	alc \$8 A-LAB CHECK	AIR	*STLE	GabWoB\$		R2AC	PCI/S	A S	02/0	5/06 06:00	04/06/06 00.2	3 12:21			BESB2	2727 1	1.00 Sa		
			_	·						= 44.3 4					/		1.00 Sa		
Sq √ o	Cnt Date	Paramete		ple Cnt Bkgrn		Instr	Geom			Efficiency1	Efficiency 2		Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj		Abn
	4/06/06 13:36	BETA	679 150	538 500	Ŀ	APC28B	1.5	N Y		.3604E-01 1.085E-02)	1.0000E+00 (0.000E+00		100% 5%	N		1.0000E+00 (0.000E+00)		.0000E+00)
Sa	Catc Date	Parameter		Sa Act	Q	Net 0	int Rt	Dpm V	•	,	•	l Used	370	Vield Ener	t Chem Vi	d,EFctU IDC/ILc0		C StdDvM	14C/1 aC
	04/06/06	BETA		3.5647		3.4506		7.9136		7.913643		1.00	. Co	100%	1 79%				dC/LCC
	04700700	JEIA	•••	(0.309425)		(1.7980		(0.6044	-	(0.60448		0.028284)		100 /4	7,3	0.203545			
				(4.000 120)		·	·												
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() -	(1s Lincertainiti	es) O - Oualifi	er II Bee	sult is Less Than	l c = 1 R	45 * TPL!	· · · · · · · · · · · · · · · · · · ·			Page	5					RecO	nt:18 RA	DCALC v4	8 21

STL Richland

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 5

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:18

4/4/2006 5:23:16 PM Sample Preparation/Analysis Balance Id:1120373922 536403, Brown and Caldwell , Brown & BD Gross Beta PrpRC5016/5014 Caldwell Pipet #: S8 Gross Beta by GPC using Sr/Y-90 curve Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060339 FILTER pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: SEQ Batch, Test: None Dish sizi aFO Prep Tech: HansenM Work Order, Lat. Total Amt Total Initial Aliquet Adj Aliq Amt QC Trace Count Detector Count On | Off CR Analyst, Comments; Sample Date /Unit Acidified/Unit Amt/Unit (Un-Acidified Prep Date Time Min 1d (24hr) Circle Init/Date 1 HX81N-1-AF 0.833sa 503.56sa 50.04g,in 0.0828q 150 415 06 J6B270158-1-SAMP 02/05/2006 06:00 AmtRec: FOLDER #Containers: 1 Scr. Alpha: 2 HX81Q-1-AF 0.833sa 501.73sa 50.08g.in 0.0831g J6B270158-2-SAMP 1-2 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 3 HX81R-1-AF 0.833sa 500.94sa 50.03g,in 0.0832aJ6B270158-3-SAMP 1.2 02/05/2006 07:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 4 HX81T-1-AF 0.833sa 508.67sa 50.10g.in 0.082qJ6B270158-4-SAMP 2-8 02/05/2006 07:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 5 HX81V-1-AF 0.833sa 501.14sa 50.00g,in 0.0831g J6B270158-5-SAMP 4.2 02/05/2006 08:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta 6 HX81W-1-AF 0.833sa 500.55sa 50.13g,in 0.0834g J6B270158-6-SAMP 38 02/05/2006 08:40 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta 7 HX81X-1-AF 0.833sa 500 96sa 50.35a.in 0.0837q J6B270158-7-SAMP 1. & 02/05/2006 06:10 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.20

4/4/2006 5:23:17 PM Sample Preparation/Analysis Balance ld:1120373922 536403, Brown and Caldwell , Brown & BD Gross Beta PrpRC5016/5014 Caldwell Pipet #: ____ S8 Gross Beta by GPC using Sr/Y-90 curve Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060339 FILTER pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: HansenM Work Order, Lot. Total Amt Total Initial Aliquot QC Tracer Adj Aliq Amt Count Detector Count On | Off **CR Analyst** Comments: Sample Date /Unit Acidified/Unit Amt/Unit (Un-Acidified) Prep Date Time Min (24hr) Circle Init/Date 8 HX811-1-AF 0.833sa 501.81sa 50.63a.in 0.084a 150 J6B270158-8-SAMP 02/05/2006 06:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta 9 HX812-1-AF 0.833sa 507.36sa 50.52g,in 0.0829g 60 J6B270158-9-SAMP 27 02/05/2006 06:05 AmtRec: FOLDER #Containers: 1 Alpha: Beta 10HX813-1-AF 0.833sa 500.90sa 50.31g.in 0.0837g J6B270158-10-SAMP 2-8 02/05/2006 06:40 AmtRec: FOLDER #Containers: 1 Alpha: Bet 11 HX814-1-AF 0.833sa 502.44sa 50.17q,in 0.0832a J6B270158-11-SAMP 3.0 02/05/2006 07:20 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Bela: 12HX815-1-AF 0.833sa 501.00sa 0.0836g 50.26g,in J6B270158-12-SAMP (o. l 02/05/2006 07:50 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Bet 13HX816-1-AF 0.833sa 505.04sa 50.32g,in 0.083q J6B270158-13-SAMP 10.7 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 14HX817-1-AF 0.833sa 501.67sa 50.49q.in 0.0838q2.8 J6B270158-14-SAMP 02/05/2006 08:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis WO Cnt: 14 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.20

536403, Brown and Caldwell			Sample Prep	aration/Ana	alysis		Ralan	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
Caldwell	li , Brown &	S8 Gross	Beta PrpRC5016/ Beta by GPC usin	5014				ce ld:11203739 ipet #:	922	
Report Due: 03/31/2006		01 STANE	DARD TEST SET	-	•		Sep1 DT/Tm	Tech-		
Batch: 6060339 FILTE SEQ Batch, Test: None	R pCi/sam	pl	Dish 5	uote: EJ , 631	74	<u> </u>	Sep2 DT/Tm			
Work Order, Lot, Total Am	Table II						Prep	Tech: Hanseni	VI	
Sample Date /Unit	Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analy	st,	Comments:
15 HX818-1-AF 0.833sa J6B270158-15-SAMP	501.09sa	50.81g,in	0.0845g 1.5	1.5	150]		309		06 4
02/05/2006 06:45		ec: FOLDER	#Castais and d	(• →	<u> </u>	32	<i>。</i>	709	احاله	/ ·
16H0EQR-1-AA-B		1.00sa.in	#Containers: 1			Scr:	Alpha:		Beta	/
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and a reciped in at me interest 4 to 34 b 18	1		T. M		117					
02/05/2006 06:00	AmtRe	9C: # C C	ontainers: 1		·	Com.		***************************************	·	
Comments:		,,,,,				Scr:	Alpha:		Beta:	
Comments: (" o () " o () Clients for Batch: 536403, Brown and Cald () () () () () () () () () (AmtRe	added		c Co	EJ , 63174	Scr:	Alpha:		Beta:	
Comments: U */o C Comments: U */o C Comments: U */o C Comments: Comments: Comments: C */o C C *	AmtRe Collocken cus well List: pCi/sam LCL:	UCL: UCL:	Mid 4-ci-	c Co	EJ , 63174		Alpha:	UCL:130	Beta:	
Comments: U */o C Comments: U */o C Comments: U */o C Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comments: C	well List: pCi/sam LCL: pCi/sam LCL: pCi/sam LCL:	UCL: UCL: UCL:130	RPD: RPD: RPD: RPD:20 RPD:20	Cs-137DA	RDL:			UCL:130		
Comments: Clients for Batch: 536403, Brown and Cald Esta RDL:5 CEQRIAR-BLK: BETA RDL:5 CEGRIAC-LCS: CB-137 RDL: Sr-90 RDL: X81NIAF-SAMP Calc Info: Uncert Level (#s).: 2 CEQRIAR-BLK: Uncert Level (#s).: 2	well List: pCi/sam LCL: pCi/sam LCL: pCi/sam LCL:70	UCL: UCL: UCL: UCL:130 UCL:130	RPD: RPD: RPD:20 RPD:20 RPD:20	Cs-137DA	RDL:			UCL:130		
Comments: Clients for Batch: 536403, Brown and Cald Selling Selling Selling	well List: pCi/sam LCL: pCi/sam LCL: pCi/sam LCL:70 pCi/sam LCL:70	UCL: UCL: UCL: UCL:130 UCL:130 UCL:130	RPD: RPD: RPD:20 RPD:20 RPD:20 .: N Sci.Not	Cs-137DA Y ODRs	RDL: I: B			UCL:130		
Comments: Comments: Comme	well List: pCi/sam LCL: pCi/sam LCL:70 pCi/sam LCL:70 pCi/sam LCL:70 Decay to SaDt: Y	Brown UCL: UCL: UCL: UCL:130 UCL:130 Elk Subt Elk Subt	RPD: RPD: RPD:20 RPD:20 .: N Sci.Not .: N Sci.Not	Cs-137DA Cs-137DA C: Y ODRs	RDL: :: B :: B		n LCL:70	UCL:130		

Batci	n Nbr: 6	6060339		Alpha E	Beta, Beta	by GPC-	Sr/Y , I	Results	4/	5/200	06 2:07	:45 PM
					Sumi	mary Rep	ort					
Statu	s Meth	Matrix	Wrk Ord	Parame	ter Sa Act	Uncert G	Units	Av !LcC	IDC	QC	Yield	RYId
Beta	by GP	C-Sr/Y	Ric	hland Sta	ndard Gross	Alpha/Beta W	o Blk Sub	ot			·	
Calc	S8	AIR	HX81N1AF	BETA	1.32E+01	(1.89E+00)	PCI/SA	R 2.59E+00	5.41E+00	*	100%	
Calc	S8	AIR	HX81Q1AF	BETA	1.15E+01	(1.81E+00)	PCI/SA	8 2.41E+00	5.03E+00		100%	
Calc	S8	AIR	HX81R1AF	BETA	1.33E+01	(1.90E+00)	PCI/SA	R 2.66E+00	5.53E+00 -	<u>}</u>	100%	
Calc	S8	AIR	HX81T1AF	BETA	1.91E+01	(2.23E+00)	PCI/SA	R 2.59E+00	5.41E+00	ҡ	100%	
Calc	S8	AJR	HX81V1AF	BETA	1.64E+01	(2.07E+00)	PCI/SA	R 2.63E+00	5.47E+00 √	1	100%	
Calc	S8	AIR	HX81W1AF	BETA	1.38E+01	(2.02E+00)	PCI/SA	R 2.42E+00	5.06E+00		100%	
Calc	S8	AJR	HX81X1AF	BETA	1.33E+01	(1.99E+00)	PCI/SA	R 2.85E+00	5.92E+00 A	7	100%	
Calc	S8	AIR	HX8111AF	BETA	1.51E+00	(1.30E+00) U	4 PCI/SA	R 2.53E+00	5.30E+00	×	100%	
Calc	S8	AIR	HX8121AF	BETA	1.76E+01	(2.10E+00)	PCI/SA	R 2.49E+00	5.21E+00	<i>*</i>	100%	
Calc	S8	AIR	HX8131AF	BETA	1.63E+01	(2.03E+00)	PCI/SA	R 2.56E+00	5.34E+00	P	100%	
Calc	S8	AIR	HX8141AF	BETA	1.89E+01	(2.50E+00)	PCI/SA	R 2.26E+00	4.71E+00		100%	
Caic	S8	AIR	HX8151AF	BETA	2.51E+01	(2.52E+00)	PCI/SA	R 2.42E+00	5.06E+00		100%	
Calc	S8	AIR	HX8161AF	BETA	2.47E+01	(2.53E+00)	PCI/SA	R 2.48E+00	5.18E+00	*	100%	
Calc	S8	AIR	HX8171AF	BETA	2.41E+01	(2.51E+00)	PCI/SA	R 2.53E+00	5.29E+00	† . •	100%	
Calc	S8	AIR	HX8181AF	BETA	-1.29E+00	(1.22E+00) U	4 PCI/SA	R 2.57E+00	5.36E+00	ю.	100%	
Calc	S8	AIR	H0EQR1AA	BETA	2.21E-01 /	(1.08E-01)	PCI/SA	R 2.02E-01	4.23E-01	3	100%	
Calc	S8	AIR	H0EQR1AC	BETA	3.26E+00	(2.93E-01)	PCI/SA	R 2.38E-01	4.95E-01	3	100%	(71%

* nesalts > moA > croL

() - (1s Uncertainities)

IDC - Instrument Detection Level in Conc Units

MLcC- Method Decision Level in Conc Units

MDC - Minimum Detectable Concentration

*Std - Lc, MDC using StdDev for Set of Blanks

Page 1

O - Qualifier, U is Less Than Lc = 1.845 $^{\circ}$ TPU All Results Displayed to Three Digits Reguardless of Significants Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:17 RADCALC v4.8.21 STL Richland

Alpha Beta, Beta by GPC-Sr/Y, Calculated Results Batch Nbr: 6060339 Detailed Report

4/5/2006 2:07:46 PM

									ł	Jetalled	нероп								
tus Method	Matrix P	rotocol	Equatio	n Set	Wr	k Ord	Units/M	atrix C	C/BB	Sa/On Date	AnalysisDa	ate/PptWi	Sep1/S	ep2 Date	QC/Trace	r Vial Mult/EntY	ld Total/Analy	Vol Final/Co	ount Vol
	AIR •	STLE							02/	05/06 06:00	04/05/06 02.3	09:14				1			
Cnt Date	Parameter	Samp	ole Cnt E	Bkgmd (Ont	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	ingr F¢t	Conv Fct/VolAdj	Decay	Abn
/05/06 10:29	BETA	343		610	G	SPC31A	1.5	N	N	4.4013E-01	1.0000E+00	N	100%	N				1.0000E+00	1
		150	į	500				Υ		(1.29 4E-02)	(0.000E+00)		5%			(0.000E+00)	12.080612		
Calc Date	Parameter	Avg	Sa Act	t	Q	Net C	nt Rt	Dpm '	Wo B	k Dpm-l	3lk Vol	Used		Yield,EnFc	t Chem Yid	,EFctU IDC/ILcC	BlkLcC/M	DC StdDvM	dC/LcC
04/05/06	BETA													100%					
			(1.89013	32)				`			. ,								
itus Method	Matrix P	rotocol	Equatio	on Set	Wr	k Ord	Units/N	latrix (C/BE	Sa/On Date	AnalysisD	ste/PptW	t Sep1/	Sep2 Date	QC/Trace	rVial Mult/EntY	'ld Total/Analy	Vol Final/Co	ount Vol
c S8	AIR '	STLE	GabWo	BS	HX81	Q1AF	PCI/S/	1	02	05/06 06:35		09:14				1	1.00 S	a	
P 0511			,J6B	3270158-	2 v4.8.	.21	AIR				01,2						0.083146 S	а	
Cnt Date	Parameter	Samp	ole Cnt I	Bkgrnd	Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
/05/06 10:29	BETA	307			(GPC31B	1.5	N	-				100%	N				1.0000E+00)
		150			_					,	` '								
					<u> </u>										Chem Ylo			IDC StdDviv	IdC/LcC
04/05/06	BETA			-										100%					
- Landa - Landa - Landa	B6-4-1		·				,	`					<u> </u>	Can 2 Data	OCATions			Vol. Final/C	aunt Mal
aus Memod					**	K OIG					Allalysist	ater pri	r achii	Sepz Daie	WOTH TOOL				Juin vo
	AIR	STLE						4	02	/05/06 07:15		09:14				1			
											•								
										·					Bik Value			·	Abn
1/05/06 10:29	BETA				(GPC31C	1.5							N				1.0000E+00	J
Calc Date	Darameter				0	Nat (ent Rt			` '	•		3 70	Yield.EnFo	ct Chem Yid			ADC StdDvN	//dC/LcC
								•					n Sa						
04/05/00	BETA											_		10070					
atus Method	Matrix i		<u>` </u>		W	rk Ord	Units/	/atrix	ЭС/В	Sa/On Date	AnaiysisD	ate/PptW	t Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent	fld Total/Analy	Vol Final/C	ount Vo
	AIR	STLE				–	PCI/S	Ā	02	/05/06 07:45	04/05/06 02.8	09:14			-2000/11 201 -2 010 -2014-2014-2014-2014-2014-2014-2014-2014	1			
Cnt Date	Parameter	Sam	ple Cnt	Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
1/05/06 10:29	BETA	395		569		GPC32A	1.5	N	N	4.2966E-01	1.0000E+00	N	100%	N				1.0000E+0	0
		150		500				Υ		(1.033E-02)	(0.000E+00))	5%			(0.000E+00)	12.188588		
(1s Uncertainit	es), Q - Qualifie	r, U Res	sult is Less	s Than L	.c = 1.6	45 * TPU										Rec	Ont:4 F	RADCALC v4	4.8.21
Instrument Det	ection Level in C	one Uni	ts. MLcC	- Method	d Decis	sion Level	in Conc U nt, All Re	Inits, Mi sult Digi	DC- M Is Ma	inimum Detecta / Not be Signific	able Concentrati cants, Date/Tim	on ie - mm/di	d/yy hh:mrr	ı, 24hr Time	e		\$	STL Richland	1
	Calc Date 04/05/06 10:29 Calc Date 04/05/06 Cat Date 04/05/06 Cat Date 04/05/06 10:29 Calc Date 04/05/06 Calc Date 04/05/06 Calc Date 04/05/06 Cat Date 04/05/06 Cat Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date 04/05/06 10:29 Calc Date	Cont Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter O4/05/06 BETA Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA Colc Date Parameter O4/05/06 BETA	C	C	C	C	C S8 AIR STLE GabWoBS HX81N1AF P 0510 J6B270158-1 v4.8.21 Cnt Date Parameter Sample Cnt Bkgrnd Cnt Instr J50 500 S00 Calc Date Parameter Avg Sa Act Q Net C C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C1.3298 C1890132 C18901	C S8 AIR STLE GabWoBS HX81N1AF PCI/SA	C S8 AIR STLE GabWoBS HX81N1AF PCI/SA AIR POS10 AIR AIR AIR AIR AIR POS10 AIR AIR AIR AIR POS10 AIR AIR AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR POS10 AIR AIR AIR POS10 AIR	C SB AIR		C S8 AIR	Record Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Set/On Date Analysis Date/PptW	Tube Method Matrix Protocol Equation Set Wrk Ord Units/Matrix QC/BB Sa/On Date AnalysisDatoPptWt Sep1/5 GS 8 AIR STLE GabWoBS HX81N1AF PCI/SA 02/05/06 06:00 04/05/06 09:14 02.3 02.0 02	Method Matrix		No. Mathod Matrix Protecol Equation Sat Wrk Ord Units/Matrix O/288 Sa/On Date Analysis/Datos/Ppt/Wt Sep1/Sep2 Date O/2/Trecer Viel Mult/Ent/Wt	10 10 10 10 10 10 10 10	

Ba	itch Nbr: 6	060339			Δ	Ipha	Beta	, Be	ta I	by GPC	-Sr/Y, C	Calcul	ated	Resu	its		4/5/20	06 2:07:4	16 PM
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm ¹	Wo B	ik Dpm-l	3ik Vo	Used		Yield,EnFo	t Chem Y	d,Efetu IDC/ILeC	BIKLcC/MD	C StdDvMe	dC/LcC
	04/05/06	ВЕТА		19.107976 (2.226714)		1.4953 (1.4082		3.4802 (0.380		3.48028 (0.38041		1.00 .027064)		100%		5.406397 2.589304			
Sq St	atus Method	Matrix i	rotoco	Equation Set	W	rk Ord	Units/N	latrix (QC/BE	Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trac	er Vial Mult/EntY	ld Total/Anaty Vo	of Final/Co	ount Vo
5 Ca 536403	ic \$8 ,P 0514	AIR	*STLE	GabWoBS ,J6B2701		I V1AF 3,21	PCI/S/ AIR	4	02	/05/06 08:15	04/05/06 04.2	09:14				1	1.00 Sa 0.083111 Sa		
Sq	Cnt Date	Parameter	Samp	ole Cnt Bkgrr	nd Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj I	Decay	Abn
1 04	1/05/06 10:29	BETA	386	623		GPC32B	1.5	N	N	4.3767E-01	1.0000E+00	N	100%	N		1.0000E+00		0000E+00)
			150	500				Υ		(1.064E-02)	(0.000E+00)	ı	5%			(0.000E+00)	12.032173		
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net 0	nt Rt	Dpm	Wo B	ik Dpm-l	Bik Vo	l Used		Yield,EnFo	t Chem Y	ld,EFctU IDC/ILcC	BIKLcC/MD	C StdDvM	ldC/LcC
	04/05/06	BETA	R	16.436874		1.3273	3E+00	3.032		3.03269		1.00	Sa	100%		5.471868	1		
				(2.070971)		(1.4017	'E-01)	(0.361	1926)	(0.36192	26) (0).027064)				2.62563			
Sq St	atus Method	Matrix	Protoco	Equation Se	t W	rk Ord	Units/N	Matrix (QC/BI	Sa/On Date	AnalysisD	ate/PptWt	Sep1	/Sep2 Date	QC/Trac	er Viai Mult/EntY	id Total/Analy V	ol Final/Co	ount Vo
6 Ca	ilo S8	AIR	*STLE	GabWoBS	HX8	1W1AF	PCI/S/	4	02	/05/06 08:40	04/05/06	09:14		· · · · · · · · · · · · · · · · · · ·		1	1.00 Sa		
536403	,P 0515			J6B2701	58-6 v4.8	3.21	AIR				03.8						0.083425 Sa		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgn	nd Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1 04	4/05/06 10:2	BETA	336	551		GPC32C	1.5	N	N	4.4424E-01	1.0000E+00	N	100%	N	***************************************	1.0000E+00	4.5045E-01 1	.000 0E +00)
			150	500				Υ		(2.771E-02)	(0.000E+00))	5%			(0.000E+00)	11.986841		
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Cnt Rt	Dpm	Wo B	lk Dpm-	Blk Vo	l Used		Yleld,EnFe	t Chem Y	ld,EFctU IDC/ILcC	BlkLcC/MD	C StdDvM	ldC/LcC
	04/05/06	BETA	R	13.83169		1.1380		2.561	674	2.56167	4	1.00) Sa	100%		5.06389			
				(2.016618)		(1.309	IE-01)	(0.358	3856)	(0.3588	56) ((0.027064)			2.423589)		
Sq St	atus Method	Matrix	Protoco	Equation Se	t W	rk Ord	Units/N	datrix (QC/BI	B Sa/On Date	AnalysisD	ate/PptWi	Sep1	/Sep2 Date	QC/Trac	er Vial Mult/EntY	'ld Total/Analy V	oi Final/Co	ount Vo
7 Ca	ılc S8	AIR	*STLE	GabWoB\$	НХ8	1X1AF	PCI/S	A	02	/05/06 06:10	04/05/06	09:14				1	1.00 Sa		
536403	,P 0516			,J6B2701	58-7 v4.6	3.21	AIR				01.8						0.083722 Sa		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgri	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abr
1 04	4/05/06 10:2	BETA	374	716	·	GPC32D	1.5	N	N	4.2959E-01	1.0000E+00	N	100%	N		1.0000E+00		.0000E+00)
			150	500				Υ		(1.330E-02)	(0.000E+00))	5%			(0.000E+00)	11,944241		
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Cnt Fit	Dpm	Wo B	llk Dpm-	Bik Vo	l Used		Yield,EnFo	t Chem Y	id,EFctU IDC/ILc0	BIKLcC/MD	C StdDvM	ldC/LcC
	04/05/06	BETA	R	13.29224		1.0613	3E+00	2.470	546	2.47054	6	1.00	Sa	100%		5.916438	3		
				(1.988988)		(1.395)	9E-01)	(0.355	595)	(0.3559	5) ((0.027064)			2.846775	5		
Sq St	atus Method	Matrix	Protoco	l Equation Se	t W	rk Ord	Units/	Matrix (QC/BI	B Sa/On Date	AnalysisD	ate/PptWi	Sep1	/Sep2 Date	QC/Tra	cer Vial Mult/EntY	/ld Total/Analy V	ol Final/Co	ount Vo
8 Ca	alc S8	AIR	*STLE	GabWoBS	HX8	111AF	PCI/S	A	02	2/05/06 06:15	04/05/06	10:15				1	1.00 Sa		·····
536403	,P 0517			,j6B2701	58-8 v4.I	3.21	AIR				01.3 🗸						0.084045 Sa		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgr	nd Cnt	instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct	Conv Fci/VoiAdj	Decay	Abr
										Pag	~ 9)-+-0 D.	DOMO	0.01
		ies), Q - Qualific ection Level in C						Jnits. Mi	DC- M	•		оп				RecO		DCALC v4	
		rived from the C											/yy hh:mn	n, 24hr Time	9		51	L Richland	

В	atch Nbr: 60	060339			Α	lpha	Beta	, Be	ta k	y GPC	-Sr	γΥ , C	alcu	lated	Resul	ts		4/5	/2006 2:07:	:47 PM
1 0	4/05/06 11:30	BETA	180 150	541 500	G	PC26C	1.5	N Y		4.1779E-01 (1.032E-02)			N	100% 5%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.89834	1.0000E+0	0
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm	Wo BI	k Dpm-l	Bik	Vol	Used		Yield,EnFc	Chem YI	d,EFctU IDC/ILc0	BikLcC/	MDC StdDvl	MdC/LcC
	04/05/06	BETA	R	1.513749 (1.297509)	U4	1.18000		0.282		0.28243 (0.24182		(0.	1.00 (027064)		100%		5.298088 2.534668			
Sq S	tatus Method	Matrix I	rotoco	Equation Set	Wr	k Ord	Units/M	atrix	QC/BB	Sa/On Date	,	Analysis Da	ite/PptWt	Sep1/	Sep2 Date	QC/Trac	er Vial Mult/Ent\	/ld Total/Anal	/Vol Final/C	Count Val
l	alc \$8 3,000357	AIR	*STLE	GabWoBS ,J6B27015	HX81: 8-9 v4.8		PCI/SA AIR		02/	05/06 06:05		04/05/06 02.7	10:15			er Colif e same et same same same et ferfigheten	1	1.00 \$ 0.082945 \$		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgm	d Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Ef	ficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAc	lj Decay	Abn
1 C	4/05/06 11:30	BETA	366 150	529 500	G	aPC26D	1.5	N Y		4.2600E-01 (8.750E-03)		000E+00 000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)	4.5045E-01 12.056129	1.0000E+0	00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm	Wo B	k Dpm-	Blk	Vol	Used		Yield,EnFc	Chem Y	id,EFetU IDC/ILet	C BIKLcC/	MDC StdDvi	MdC/LcC
	04/05/06	BETA	R	17.617674 (2.097848)		1.38200		3.244 (0.36	1099 3378)	3.24409 (0.3633		(0	1.00 027064		100%		5.208723 2.490684			
Sq S	tatus Method	Matrix	Protoco	Equation Set	Wr	k Ord	Units/M	atrix	QC/BB	Sa/On Date	-	AnatysisDa	te/PptWi	t Sep1/	Sep2 Date	QC/Trac	er Vial Mult/Ent	/Id Total/Anai	y Vol Final/0	Count Vo
10 C 5 36 40	alc S8 3,000358	AIR	'STLE	GabWoBS ,J6B27015	HX81 8-10 v4.8		PCI/SA AIR	\	02/	05/06 06:40		04/05/06 02.8	10:15			MacNan attitud pull illing over en en	1	1.00 0.083666		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrn	d Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Ef	fficiency 2	Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VoiA	dj Decay	Abn
1 ()4/05/06 11:30) BETA	382 150	608 500	C	GPC27A	1.5	N Y		4.4028E-01 (9.704E-03)		000E+00 000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.952306	1.0000E+0	00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	ont Rt	Dpm	Wo B	lk Dpm-	Blk	Vol	Used		Yield,EnFc	t Chem Y	Id,EFctU IDC/ILc	C BIKLcC/	MDC StdDv	MdC/LcC
	04/05/06	BETA	R	16.272015 (2.031073)		1.3306 (1.3932		3.022	2338 6938)	3.02233 (0.3569		(0	1.00 027064.) Sa)	100%		5.34064 2.56138			
Sq S	tatus Method	Matrix	Protoco	I Equation Set	Wr	k Ord	Units/N	atrix	QC/BB	Sa/On Date		AnalysisDa	ate/PptW	t Sep1.	/Sep2 Date	QC/Trac	erVial Mult/Ent	Yld Total/Anal	yVol Final/0	Count Vo
11 C	alc \$8 3,000359	AIR	*STLE	GabWoB\$,J6B27018	HX81 58-11 v4.		PCI/S/	\	02	/05/06 07:20		04/05/06 03.0 ;	10:15				1	1.00 0.0831 77		- Bullian
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgm	d Cnt	instr	Geom	Trc/Av	/ Ent	Efficiency1	Ef	Miciency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolA	dj Decay	Abn
1 ()4/05/06 11:30	BETA	446 150	610 500	Ċ	GPC27B	1.5	N Y		5.0261E-01 (3.949E-02)		000E+00 000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+0	00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	Ont Pit	Dpm	Wo B	ik Dpm-	Bik	Vol	Used		Yield,EnFo	t Chem Y	ld,EFctU IDC/ILc	C BikLcC	MDC StdDv	/MdC/LcC
	04/05/06	BETA	A	18.89193 (2.502549)		1.7533 (1.4921		3.486 (0.44	3467 0085)	3.48846 (0.4400		(0	1.00 .027064	0 Sa	100%		4.71321 2.26061			
	(1e Uncertainiti	es) O Oualific	ar li Da	sult is Less Than	10-16	(A5 * TD) !				Pag	њ 3				······································	· · · · · · · · · · · · · · · · ·	Rec	Cnt: 12	RADCALC V	/4,8,21
iĎC -	Instrument Dete	ection Level in C	onc Un	its, MLcC - Meth ion of Each Sr-89	od Decisi	ion Level i	in Conc U nt, All Re	nits, M sult Dig	DC- Mi its May	nimum Detecta	able C	Concentration, Date/Time	en e - mm/do	i/yy hh:mr	n, 24hr Time		1,00		STL Richlan	

В	atch Nbr: 6	60339			Alpha	Beta,	Beta	by GPC	-Sr/Y,C	alcul	ated	Resu	lts		4/5/	2006 2:07:4	17 PM
Sq St	atus Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/M	atrix QC/E	B Sa/On Date	AnalysisDat	e/PptWt	Sep1/S	ep2 Date	QC/Trace	er Vial Mult/EntY	ld Total/Analy	Vol Final/Co	unt Vo
12 Ca 36403	alc \$8 3,000360	AIR	*STLE	GabWoBS ,J6827015	HX8151AF 58-12 v4.8.21	PCI/SA AIR	. 0	2/05/06 07:50	04/05/06 1 06.1	0:15				1	1.00 S 0.083566 S		randraman,
Sq	Cnt Date	Paramete	r Samp	ile Çnt Bkgrn	d Cnt Instr	Geom	Trc/Av Er	nt Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	4/05/06 11:30	BETA	481 150	560 500	GPC270	1.5	N N Y	4.4728E-01 (9.894E-03)	1.0000E+00 (0.000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
Sq	Calc Date	Parameter		Sa Act	Q Net	Cnt At	Dpm Wo	• ,	, ,	Jsed		Yleid.EnFo	t Chem Yie	i,EFctU IDC/ILc0		IDC StdDvMi	4C/L cC
	04/05/06	ВЕТА		25.147197 (2.520487)		67E+00 68E-01)	4.665227 (0.427917	4.66522	27	1.00	Sa	100%		5.060041 2.422595			
Sq St	atus Method	Matrix		Equation Set	Wrk Ord	Units/M	atrix QC/E	B Sa/On Date	AnalysisDat	·	*****	Sep2 Date	QC/Trace	er Vial Mult/EntY		Vol Final/Co	ount Vo
13 Ca 536403	alc S8 3,000361	AIR	*STLE	GabWoBS ,J6B27018	HX8161AF 58-13 v4 8 21	PCI/SA AIR	C	2/05/06 08:20	04/05/06 10.7	10;15				1	1.00 S 0.082997 S		***************************************
Sq	Cnt Date	Paramete	r Samı	ole Cnt Bkgrn	d Cnt Instr	Geom	Trc/Av Ei	nt Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1 0	4/05/06 11:30	BETA	471 150	566 500	GPC27) 1.5	N N Y	4.4186E-01 (1.118E-02)	1.0000E+00 (0.000E+00)	N	100% 5%	N	-	1.0000E+00 (0.000E+00)		1.0000E+00	ı
Sq	Calc Date	Parameter	Avg	Sa Act	Q Net	Cnt Rt	Dpm Wo	, ,	•	Jsed		Yield,EnFo	t Chem Yi	JEFetU IDC/ILeC		IDC StdDvM	dC/LcC
	04/05/06	BETA		24.664342 (2.530443)		00E+00 81E-01)	4.544465 (0.428563			1.00 027064)		100%		5.183681 2.482357			
Sq St	atus Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/M	etrix QC/E	BB Sa/On Date	AnalysisDat	e/PptWt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/EntY	ld Total/Analy	Vol Final/Co	ount Vo
14 Ca 536403	alc \$8 3,000362	AIR	*STLE	GabWoBS ,J6B27018	HX8171AF 58-14 v4.8.21	PCI/SA AIR	. 0	2/05/06 08:45	04/05/06 ⁻ 02.8	11:54				1	1.00 S 0.083836 S		hô
Sq	Cnt Date	Paramete	r Samp	ole Cnt Bkgrn	d Cnt Instr	Geom	Trc/Av Er	nt Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Abn
1 ()	4/05/06 13:09	BETA	460 150	569 500	GPC32/	1.5	N N Y	4.2966E-01 (1.033E-02)	1.0000E+00 (0.000E+00)	N	100% 5%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.928004	1.0000E+00	
Sq	Calc Date	Parameter	Avg	Sa Act	Q Net	Cnt Rt	Dpm Wo	Blk Dpm-	Blk Vol (Jsed		Yield,EnFo	t Chem Yle	i,EFctU IDC/ILcC		IDC StdDvM	ldC/LcC
	04/05/06	BETA		24.118384 (2.50865)		67E+00 '3E-01)	4.488837 (0.430237	4.48883 7) (0.4302		1.00 027064)		100%		5.290811 2.533946			
Sq St	atus Method	Matrix	Protoco	Equation Set	Wrk Ord	Units/M	atrix QC/E	BB Sa/On Date	AnalysisDat	e/PptWt	Sep1/S	Sep2 Date	QC/Trace	er Vial Mult/EntY	id Total/Analy	Vol Final/Co	ount Vo
15 Ca 536403	alc S8 3,000363	AIR	*STLE	GabWoBS ,J6B27018	HX8181AF 58-15 v4.8.21	PCI/SA AIR	0	2/05/06 06:45	04/05/06 1 01.5 _/	11:54				1	1.00 S 0.084465 S	•	
Sq	Cnt Date	Paramete	r Şamı	ole Cnt Bkgrn	d Cnt Instr	Geom	Trc/Av Er	nt Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	ingr Fct	Conv Fct/ValAd	Decay	Abn
1 0	4/05/06 13:09	BETA	171	623	GPC32E	3 1.5	N N	4.3961E-01	1.0000E+00	N	100%	N		1.0000E+00		1.0000E+00	
			150	500			Υ	(1.068E-02)	(0.000E+00)		5%			(0.000E+00)	11.839178		
					Lc = 1.645 * TPU			Pag			 			RecC	nt:15 F	ADCALC v4.	.8.21
IDC - Sr-89	Instrument Det Counts are De	ection Level in (ived from the C	Conc Unit Combination	s, MLcC - Meth on of Each Sr-89	od Decision Leve 9/90 and Y-90 Co	in Conc Ur unt, All Res	nits, MDC-! uit Digits Ma	dinimum Detecta ay Not be Signifi	able Concentration cants, Date/Time	· - mm/dd/j	yy bh:mm,	, 24hr Time			S	TL Richland	

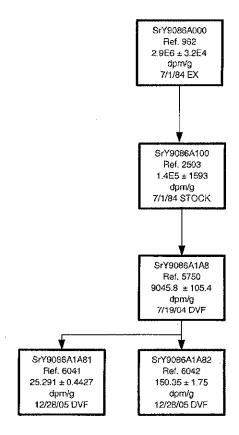
l	Bat	ch Nbr: 60	60339			Α	lpha	Beta	, Ве	ta I	y GPC	-Sr/Y,(Calcu	lated	Resu	lts		4/5/2	006 2:07:4	7 PM
S	q	Calc Date	Parameter	Avg	Sa Act	Q	Net (Ont Rt	Dpm	Wo B	lk Dpm-i	3lk Vo	ol Used		Yield,EnFo	t Chem Yi	d,EFctU IDC/ILc0	BlkLcC/MD	C StdDvMd	tC/LcC
	(04/05/06	BETA	R	-1.28591	U4	-1.0600	00E-01	-0.24	1125	-0.24112	25	1.00	Sa	100%		5.36045			
					(1.22189)		(1.004)	3E-01)	(0.22	8913)	(0.2289	3) (0.027064)			2.572167	,		
Sq.	Stat	tus Method	Matrix	Protoco	Equation Set	W	rk Ord	Units/N	Aatrix	QC/BE	3 Sa/On Date	Analysisl	Pate/PptWi	Sep1	/Sep2 Date	QC/Trac	er Vial Mult/Ent\	'ld Total/Analy V	ol Final/Co	unt Vol
16	Calc	S8 .	AIR	*STLE	GabWoBS	HOE	QR1AA	PCI/S/	A 1	3 02	/05/06 06:00	04/05/0	6 11:54	. autoria de salterio di sindando e	endlen ure enem bloder en		1	1.00 Sa		
ראו,כ	ra.	-LAB BLANK			,J6C0100	00-339		AIR				00.1						1.00 Sa		
Sq	l	Cnt Date	Parameter	r Sam	ple Cnt Bkgrn	d Cnt	Instr	Geom	Trc/A	r Ent	Efficiency1	Efficiency :	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	04/	05/06 13:09	BETA	198	551		GPC32C	1.5	N	N	4.4391E-01	1.0000E+0) N	100%	N		1.0000E+00	4.5045E-01	1.0000E+ 00	Marian III e same as au
				150	500				Υ		(2.769E-02)	(0.000E+00))	5%			(0.000E+00)	1.00		
S	q	Calc Date	Parameter	Avg	Sa Act	Q	Net	Ont At	Dpm	Wo B	lk Dpm-	Bik V	ol Used		Yield,EnFo	t Chem Y	Id,EFctU IDC/ILct	C BikLcC/MI	OC StdDvM	dC/LcC
	(04/05/06	BETA	R	0.221211		2.1800	0E-01	0.49	109	0.49109		1.00) Sa	100%		0.42276	3		
					(0.108176)		(1.049	0E-01)	(0.23	9548)	(0.2395	18) (0.017321)			0.20233	3		
Sq	Stat	tus Method	Matrix	Protoco	Equation Set	w	rk Ord	Units/N	/atrix	QC/BI	B Sa/On Date	Analysisi	Date/PptW	t Sep1	/Sep2 Date	QC/Trac	er Vial Mult/Ent	/id Total/Analy \	/ol Final/Co	ount Vol
17	Cal	S8	AIR	*STLE	GabWoBS	HOE	QR1AC	PCI/S	A	S 02	2/05/06 06:00	04/05/0	6 11:54			BESB	2757 1	1.00 Sa		
0, IN	TRA	-LAB CHECK			,J6C010	000-339		AiR				00.2				BESB	2757 Alq	1.00 Sa	ι	
Sc	ŧ	Cnt Date	Paramete	r Sam	ple Cnt Bkgrr	nd Cnt	Instr	Geom	Trc/A	/ Ent	Efficiency1	Efficiency	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
1	04/	/05/06 13:09	BETA	682	716		GPC32D	1.5	N	N	4.3004E-01	1.0000E+0	0 Ni	100%	N		1.0000E+00	4.5045E-01	1.0000E+00	1
				150	500				Υ		(1.332E-02)	(0.000E+00))	5%			(0.000E+00)	1.00		
5	Sq.	Calc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpn	Wo B	ilk Dpm-	Bik V	ol Used		Yield,EnF	t Chem Y	Id,EFctU IDC/ILc	C BIKLcC/MI	DC StdDvM	dC/LcC
	(04/05/06	BETA	R	3.262462	•	3,1146	7E+00	7.24	2673	7.24267	3	1.0	0 Sa	100%	71	% 0.49482	1		
					(0.293238)		(1.821	4E-01)	(0.60	0699)	(0.6006	99) (0.017321)			0.23809			
																	ounter	1		
																hec	punter	/ 1		

RecCnt:17

BETA STANDARDS AND TRACEABILITY

5/26/2006	12:07:29 PM	Standard	Material F	ractions (Via	als)	
Vial I	Prep: 5/25/05 to	5/27/06,SMFractionIdentifier	Like: BESB2757%, Ord	er by SMIdentifier,Constitue	entCode,SMFractionIde	
Vial Identifier		Prep Activity/Concentration	Std Wt Used	Prep,Decayed To Date		d Activity/Concentration
		ndard: SRY9086A1A82	Ref: 12/28/2005	1.5035E+02 ± 1.164I		
BESB2757	SRY-90	1.0222E+01 <u>+</u> 8.192E-02		3/30/2006 3/30/2006		±1.157E+00 DPM
		1.0222E+001 ± 1.022E+001	(1)	1.0222E+001 , 1.0222	2E+001	
OTI DI LI L	OME	1010	1 3			10
STL Richland. * - Isotope is	, SMFractions v	4.8.12	Page 1		Hecon	d Count: 1

SrY9086A1A48



SRY9086A.XLW

ISOTOPE DILUTION RECORD

1) Prepared by to	<u>da</u>	2) Date Prepared	-	12/28/2005
3) Source Identification	on Number / Ref. Number	SRY9086A1A8		5750
4) Source Activity (dpm ± d _l	pm/g)	8.7400E+03	± _	1.018E+02
5) Percent error of Source A	Activity	1.1165 %	ı	
6) Weight of Source Materia	al used (g)	2.1494		
7) (% Error) of Weight of So	ource Material used	0.2233 %	+	
8) Diluent		2M HNO3		
9) Total Weight of the Diluti	on (g)	124.95		
10) (% Error) of Total Weigh	ht of the Dilution	0.2401 %)	
11) Specific Activity	of Diluted Solution dpm/g	1.5035E+02	± .	1.750E+00
12) Total Uncertainty		1.164 %		
40) Dilution Identifica	ntion Number / Ref. Number	SRY9086A1A82		6042
13) Dilution Identifica	MON Namber / Net. Namber			
14) Calibration Reference I		12/28/2005		
,	Date			12/28/2005
14) Calibration Reference [Date	12/28/2005	•	12/28/2005 1/17/2006
14) Calibration Reference I15) Isotope Inventory File u16) Reviewed by/date	Date	12/28/2005 tda		
14) Calibration Reference I15) Isotope Inventory File u16) Reviewed by/date	Date pdate by/date	12/28/2005 tda SEW	· *****	
14) Calibration Reference I 15) Isotope Inventory File u 16) Reviewed by/date 17) Location QC	Date pdate by/date	12/28/2005 tda SEW 18) Exhausted	- - *****	
14) Calibration Reference I. 15) Isotope Inventory File u. 16) Reviewed by/date 17) Location QC 7) % Error of Wt. used = (0.	Date pdate by/date CLAB CALCULATIONS	12/28/2005 tda SEW 18) Exhausted	*****	
14) Calibration Reference I. 15) Isotope Inventory File u. 16) Reviewed by/date 17) Location QC 7) % Error of Wt. used = (0. 10) % error of Dilution Wt. =	Date pdate by/date CLAB CALCULATIONS 0048 / Weight of Source Material used * 1	12/28/2005 tda SEW 18) Exhausted	· *****	

Form:

CC-006, 7/15/99, Rev 3

Sheet3

			SrY90 Verif	ication Che	ck	
					1/4/2006	THE STREET STREET, STR
SrY9086A1	A82 #6042					
150.35 ± 1.	75 dpm/g					
		dom	dpm	% yield		
I.D.		dpm found	expected	76 yieiu		·
DVF2287		148.202	150.67	98.36		
DVF2288		153.997	150.16	102.56		
DVF2289		149.969	150.08	99.93		
			Average	101.24		
			Std. Dev	1.86		
The origina	NIST Cert	ificate is lo	Std. Dev	1.86	trol Departm	ent.

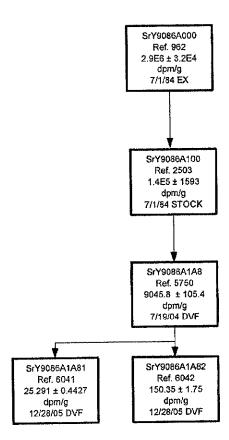


Liquid Scintillation Counting Sheet

OC 84	TCH Number: T06 000 2	2			
Position	WorkOrder No.	Volume Analyzed (g mL L Hr)	Total Sample Volume (g mL L) OR Multiplier	Vial Label or Spike Value	Preparation Information
1	BN.			5 ML DEAD WATER	Analysis: <u>Sr Y 90</u>
2	DVF 2284	5,49080	DAIA81	SAME AS WOH	Matrix: DIRECT QC
3	2285		#6041		Client: RicH Date Cocktail Added:
4	2286				1/3/06
5	2287	51490861	11A82		Total Count Time 30 min
6	1188	1	#6042		Volume Counted: Diazz mLs. Tray No(s): /5
7	2289	\\ \			Initials: TOA
8					
9					Counting Information
10	,				Tower No: _3
11				,	CR Initials: 65
12					
13					Comments
14			Style		15 ml READY GEL TO AU SAMPLES
15					, -
16					
17					
18					
19					
20					
21					
22					
23					
24					<u> </u>
1	1				DC 11/1 Pay 2 12/00

```
Protocol #: 3 Name: ET-DPM Cal Check
                                             03-Jan-06 16:57
                              O Bkg= 0.00 %2 Sigma=0.50
Region A: LL-UL= 0.0-2000 Lcr=
                               O Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 0.0-2000 Lcr=
                              0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lor=
Time = 30.00 QIP = tSIE
                                ES Terminator = Count
Set up 29-Jan-1992 M. Lane
Luminescence Correction On
     TIME
             CPMA A: 25% tSIE SIS LUM FLAG
 9#
             47.30 5.30 354.0 1032.6 1
  1 30.00
ET CPM =
             47,300 Background
  2 30.00
             25.90 15.55 381.6 670.21
ET DFM =
             27,752
             26.20 15.40 362.3 776.11
  30.00
ET DPM =
             20.719
  4 .30.00
             26.80 15.09 363.5 626,49
ET DPM =
             27.788
            146.13 3.88 361.9 719.13
  5 30,00
ET DPM =
            148.202
  6 30.00
            150.63 3.80 365.0 745.49
ET DPM =
            153.997
  7 30.00
            145.83 3.88 359.1 685.61
                                      0
ET DPM ==
            149.969
```

SrY9086A1A48



Vial Identifier	Constituer	t Prep Activity/Cond	centration		Std Wt U	sed	Prep,Deca	yed To Date	Prep by Std Decayed	Activity/Conce	ntration
	Parent St	andard: SRY9086A	1A82	Ref:	12/28/200)5	1.5035E+	02 ± 1.164	1E+00 DPM/G	•	
DVF2287	SRY-90	1.5067E+02 <u>+</u> 1.	.167E+00	DPM	1.0025	g	1/3/2006	1/3/2006	Armstron 1.5029E+02	± 1.164E+00	DPM/G
DVF2288	SRY-90	1.5016E+02 ± 1.	.163E+00	DPM	0.9991	g	1/3/2006	1/3/2006	Armstron 1.5029E+02	± 1,164E+00	DPM/G
DVF2289	SRY-90	1.5008E+02 ± 1.	.162E+00	DPM	0.9986	g	1/3/2006	1/3/2006	Armstron 1.5029E+02	±1.164E+00	DPM/G

STL Richland, SMFractions v4.8.12

*- Isotope is an Impurity

Page 2

Record Count: 6





Approval No. 0146

Desw. rotion

Principal radionuclide:

Strontlum-90

Product code:

SIZ.44

Daughter radionuclida:

Yttrium-90

Solution number: \$4/31/118

Measurement

Reference time:

1200 GMT on 1 July 1984

Radioactive concentration of strontium-90:

1.316 microcuries per gram of solution

which is equivalent to:

48.7

Mass of solution:

kilobecquerels per gram of solution

5.0380

grams

Total activity of strontium-90:

6.63

microcuries

which is equivalent to:

245

kilobecquerels

Method of measurement used (see reverse of the certificate): K

Accuracy

Overall uncertainty in the radioactive concentration quoted above:

+ 1.11 %

Random uncertainty: ± 0.21 %

Systematic uncertainty: ± 0.90 %

Overall uncertainty is defined on the reverse of the certificate.

Radionuclidic

Purity

The estimated activities of any radioactive impurities found by high-resolution gamma ray spectrometry, or In any other examination of the solution, are listed below expressed as percentages of the activity of the principal radionuclide at the reference time.

Other radionucildes less than 0.01 \$

Chemical Composition 0.1M HCl containing 100 micrograms of strontlum and 100 micrograms of yttrium per mi.

Physical Data

Recommended half life:

28.6 ± 0.3 years

Strontlum-90: 100% beta particle emission.

Yttrium-90: 100% beta particle emission. Half life 64.1 ± 0.1 hours.

The activity of the yttrium-90 is equal to the activity of the strontium-90.

Remarks

Tests made over a period of 2 years on standardized solutions of strontium-90 stored in glass ampoules have shown that loss of strontium-90 from solution is negligible other than by radioactive decay.

Approved Signatory

A.G. Tuck

Page 1 of 1

Methods of measurement

The measurement techniques listed below are currently in use at Amersham International for the absolute standardization of radioactive solutions. The methods used for this standardization are indicated on the front of the certificate.

Using a gas	flow	proportional	counter
-------------	------	--------------	---------

А	4π beta counting
В	4π alpha counting

C 4π internal conversion electron counting

D 4π coincidence counting

E 4π anticoincidence counting

F 4π coincidence and anticoincidence counting

Using a liquid scintillation counter

G 4π coincidence counting

H 4π anticoincidence counting

 $J=4\pi$ coincidence and anticoincidence counting

 4π efficiency tracing

S.I. unit of radioactivity

The S.I. unit of radioactivity is the becquerel

1 becquerel (Bq)

1 nuclear transformation per second, therefore

1 curie (Ci)

 3.7×10^{10} becquerels exactly.

Useful conversion factors are:

1 microcurie (μ Ci) = 3.7 x 10⁴ Bq = 37 kilobecquerels (kBq) 1 millicurie (mCi) = 3.7 x 10⁷ Bq = 37 megabecquerels (MBq)

1 kilobecquerel (kBq) = 27.027 nanocuries (nCi) 1 megabecquerel (MBq) = 27.027 microcuries (μ Ci)

Overall Uncertainty

The overall uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99.7% confidence level, and the estimated systematic uncertainties in the measurement.

BETA CONTINUING CALIBRATION

Quality Assurance Report. Generated 26-MAY-2006 11:37:29.06

Cult 26 Duse

QA Filename : \$DISK1:[QUAD26.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : Quad 26a Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 58.635849 Std Deviation : 0.412047

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:01	СНК	59.3000	 -	
2-MAR-2006 05:34	CHK	59.5000	In	
3-MAR-2006 05:25	CHK	58.7000		
3-MAR-2006 05:41	CHK	No Value		
4-MAR-2006 09:07	CHK	59.0000		
7-MAR-2006 05:23	CHK	58.6000		
8-MAR-2006 05:52	CHK	58.1000		
8-MAR-2006 06:23	CHK	No Value		
9-MAR-2006 05:37	CHK	57.8000	In	
10-MAR-2006 06:13	CHK	58.4000		
13-MAR-2006 05:14	CHK	58.8000		
13-MAR-2006 05:33	CHK	No Value		
14-MAR-2006 04:56	CHK	58.8000		
14-MAR-2006 05:18	CHK	No Value		
15-MAR-2006 05:07	CHK	58.6000		
15-MAR-2006 05:25	CHK	No Value		
16-MAR-2006 06:53	CHK	58.9000		
17-MAR-2006 05:50	CHK	58.5000		
18-MAR-2006 07:12	CHK	59.3000		
20-MAR-2006 05:03	CHK	59.1000		
21-MAR-2006 05:04	CHK	58.7000		

21-MAR-2006 05:21 (CHK	No Value	111
22-MAR-2006 05:35 (CHK	58.7000	
22-MAR-2006 06:03 (CHK	No Value	111
23-MAR-2006 06:13 (CHK	59.4000	
24-MAR-2006 05:26 (CHK	59.3000	iii
25-MAR-2006 08:10 (CHK	59.7000	In
26-MAR-2006 07:14 (CHK	58.9000	i i i i
27-MAR-2006 05:08 C	CHK	59.9000	Ab Ac
27-MAR-2006 05:27 (CHK	59.9000	Ab Ac
28-MAR-2006 04:54 (CHK	59.0000	
28-MAR-2006 05:16 (CHK	No Value	
29-MAR-2006 05:51 C	CHK	58.9000	
30-MAR-2006 05:33 (CHK	59.3000	
31-MAR-2006 06:21 C	CHK	59.5000	In
31-MAR-2006 06:37 C	CHK	No Value	
3-APR-2006 04:51 CF	HK	59.2000	1 1 1
4-APR-2006 05:37 CF	НK	58.8000	
Quality Assurance Mul	ti-Test Full Report (con	tinued)	Page:

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
			 -	
5-APR-2006 04:58		59.5000	In	
6-APR-2006 05:57	CHK	59.1000		
7-APR-2006 05:48	CHK	58.8000		
10-APR-2006-05:19	CHK	58.5000		
11-APR-2006 05:02	CHK	58.5000		
12-APR-2006 06:13	CHK	57.4000	In	
12-APR-2006 06:28	CHK	No Value		

Description : Quad 26b Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 53.349998 Upper Bound : 56.200001

Investigate Level: 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

: 54.786793 Mean Std Deviation: 0.476420

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:01	CHK	53.5000	In	
2-MAR-2006 05:34	CHK	53.8000	In	
3-MAR-2006 05:25	CHK	52.7000	Be Ac	
3-MAR-2006 05:41	CHK	52.9000	Be Ac	
4-MAR-2006 09:07	CHK	53.9000		
7-MAR-2006 05:23	CHK	53.7000	In	
8-MAR-2006 05:52	CHK	53.1000	Be Ac	
8-MAR-2006 06:23	CHK	52.5000	Be Ac	
9-MAR-2006 05:37	CHK	54.4000		
10-MAR-2006 06:13	CHK	54.2000)	
13-MAR-2006 05:14	CHK	54.0000)	
13-MAR-2006 05:33	CHK	No Value		
14-MAR-2006 04:56	CHK	53.7000	In	
14-MAR-2006 05:18	CHK	No Value		
15-MAR-2006 05:07	CHK	53.7000	In	
15-MAR-2006 05:25	CHK	No Value		
16-MAR-2006 06:53	CHK	54.4000		
17-MAR-2006 05:50	CHK	52.9000	Be Ac	
18-MAR-2006 07:12	CHK	54.1000		
20-MAR-2006 05:03	CHK	53.7000	In	
21-MAR-2006 05:04	CHK	53.7000	In	
21-MAR-2006 05:21	CHK	No Value		
22-MAR-2006 05:35	CHK	53.0000	Be Ac	
22-MAR-2006 06:03	CHK	52.9000	Be Ac	
23-MAR-2006 06:13	CHK	53.7000	In	
24-MAR-2006 05:26	CHK	53.7000	In	
25-MAR-2006 08:10	CHK	53.8000	In	
26-MAR-2006 07:14	CHK	54.1000		
27-MAR-2006 05:08	CHK	54.4000		
27-MAR-2006 05:27	CHK	No Value		
28-MAR-2006 04:54	CHK	54.2000		
Quality Assurance M	ulti-Test Full	Report (continued)	I	Page: 3
Measurement Time		Sample Analyst		LU SD UD BS Rej
28-MAR-2006 05:16		No Value		
29-MAR-2006 05:51	CHK	53.9000		
30-MAR-2006 05:33	CHK	54.0000		
31-MAR-2006 06:21	CHK	53.5000	In	
31-MAR-2006 06:37	CHK	No Value		
3-APR-2006 04:51	СНК	53.8000	In	

4-APR-2006 05:37	CHK	53.6000	In
5-APR-2006 04:58	CHK	53.9000	
6-APR-2006 05:57	CHK	54.3000	[] [
7-APR-2006 05:48	CHK	54.1000	
10-APR-2006 05:19	CHK	53.8000	In
11-APR-2006 05:02	CHK	54.3000	
12-APR-2006 06:13	CHK	53.1000	Be Ac
12-APR-2006 06:28	CHK	53.5000	In

Description : Quad 26c Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 53.755695 Std Deviation : 0.540287

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:01	СНК	53.1000		
2-MAR-2006 05:34	CHK	53.8000	İİİ	
3-MAR-2006 05:25	CHK	52.2000	In	
3-MAR-2006 05:41	CHK	No Value	i i i	
4-MAR-2006 09:07	CHK	52.5000	In	
7-MAR-2006 05:23	CHK	53.2000	İ	
8-MAR-2006 05:52	CHK	51.8000	Be Ac	
8-MAR-2006 06:23	CHK	52.6000	In	
9-MAR-2006 05:37	CHK	52.9000		
10-MAR-2006 06:13	CHK	53.2000		
13-MAR-2006 05:14	CHK	51.7000	Be Ac	
13-MAR-2006 05:33	CHK	52.6000	In	
14-MAR-2006 04:56	CHK	51.9000	Be Ac	
14-MAR-2006 05:18	CHK	52.0000	Be Ac	
15-MAR-2006 05:07	CHK	51.5000	Be Ac	Í
15-MAR-2006 05:25	CHK	53.0000		,
16-MAR-2006 06:53	CHK	52.9000		
17-MAR-2006 05:50	CHK	53.4000	i i i	

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      18-MAR-2006 07:12 CHK
      52.3000 |In| |

      20-MAR-2006 05:03 CHK
      52.5000 |In| |

      21-MAR-2006 05:04 CHK
      52.0000 Be|Ac| |

      21-MAR-2006 05:21 CHK
      53.3000 || |

      22-MAR-2006 05:35 CHK
      53.8000 || |

      22-MAR-2006 06:03 CHK
      No Value || |

      Quality Assurance Multi-Test Full Report (continued)
      Page : 4
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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
23-MAR-2006 06:13	СНК	53.7000	 	
24-MAR-2006 05:26	CHK	52.3000	In	
25-MAR-2006 08:10	CHK	52.8000		
26-MAR-2006 07:14	CHK	52.3000	[In]	
27-MAR-2006 05:08	CHK	52.9000		
27-MAR-2006 05:27	CHK	No Value		
28-MAR-2006 04:54	CHK	52.0000	Be Ac	
28-MAR-2006 05:16	CHK	52.3000	In	
29-MAR-2006 05:51	CHK	52.6000	In	
30-MAR-2006 05:33	CHK	53.7000		
31-MAR-2006 06:21	CHK	52.1000	Be Ac	
31-MAR-2006 06:37	CHK	52.5000	In	
3-APR-2006 04:51 (CHK	52.5000	In	
4-APR-2006 05:37 (CHK	53.1000		
5-APR-2006 04:58 (CHK	53.4000		
6-APR-2006 05:57 (CHK	53.2000		
7-APR-2006 05:48 (CHK	52.4000	In	
10-APR-2006 05:19	CHK	52.9000	i i i	
11-APR-2006 05:02	CHK	53.1000	ÌÌÌ	
12-APR-2006 06:13	CHK	52.3000	In	
12-APR-2006 06:28	CHK	No Value	111	
			•	

Description : Quad 26d Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 50.000000 Upper Bound : 57.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00 Start Date

Std Deviation: 1.018731 : 53.924530 Mean

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:01	СНК	52.3000	 	
2-MAR-2006 05:34	CHK	53.4000	iii	
3-MAR-2006 05:25	CHK	52.6000	iii	
3-MAR-2006 05:41	CHK	No Value		
4-MAR-2006 09:07	CHK	53.6000		
7-MAR-2006 05:23	CHK	53.1000	iii	
8-MAR-2006 05:52	CHK	51.9000	i i i	
8-MAR-2006 06:23	CHK	No Value	111	
9-MAR-2006 05:37	CHK	53.0000		
10-MAR-2006 06:13	CHK	52.9000		
13-MAR-2006 05:14	CHK	53.8000		
13-MAR-2006 05:33	CHK	No Value		
14-MAR-2006 04:56	CHK	53.2000		
14-MAR-2006 05:18	CHK	No Value		
15-MAR-2006 05:07	CHK	53.1000		
15-MAR-2006 05:25	CHK	No Value		
16-MAR-2006 06:53	CHK	53.5000		
Quality Assurance M	lulti-Test Full	Report (continued)		Page: 5
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Measurement Time				LU SD UD BS Rej
	СНК	53.0000		LU SD UD BS Rej
17-MAR-2006 05:50	CHK CHK			LU SD UD BS Rej
17-MAR-2006 05:50 18-MAR-2006 07:12	CHK CHK CHK	53.0000 54.1000	1	LU SD UD BS Rej
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03	CHK CHK CHK CHK	53.0000 54.1000 53.1000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04	CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21	CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35	CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03	CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13	CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26	CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26 25-MAR-2006 08:10	CHK CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000 52.9000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26 25-MAR-2006 07:14	CHK CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000 52.9000 52.2000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26 25-MAR-2006 08:10 26-MAR-2006 07:14 27-MAR-2006 05:08	CHK CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000 52.9000 52.2000 53.2000		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26 25-MAR-2006 07:14 27-MAR-2006 05:08 27-MAR-2006 05:27	CHK CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000 52.9000 52.2000 53.2000 No Value		· · · · · · · · · · · · · · · · · ·
17-MAR-2006 05:50 18-MAR-2006 07:12 20-MAR-2006 05:03 21-MAR-2006 05:04 21-MAR-2006 05:21 22-MAR-2006 05:35 22-MAR-2006 06:03 23-MAR-2006 06:13 24-MAR-2006 05:26 25-MAR-2006 07:14 27-MAR-2006 05:08 27-MAR-2006 05:27 28-MAR-2006 04:54	CHK CHK CHK CHK CHK CHK CHK CHK CHK CHK	53.0000 54.1000 53.1000 54.3000 No Value 53.8000 No Value 52.4000 53.0000 52.9000 52.2000 53.2000 No Value 53.2000		· · · · · · · · · · · · · · · · · ·

31-MAR-2006 06:21 CHK	51.8000 In
31-MAR-2006 06:37 CHK	No Value
3-APR-2006 04:51 CHK	53.5000
4-APR-2006 05:37 CHK	53.2000
5-APR-2006 04:58 CHK	53.7000
6-APR-2006 05:57 CHK	53.7000
7-APR-2006 05:48 CHK	53.7000
10-APR-2006 05:19 CHK	53.6000
11-APR-2006 05:02 CHK	53.1000
12-APR-2006 06:13 CHK	53.8000
12-APR-2006 06:28 CHK	No Value

Quality Assurance Report. Generated 26-MAY-2006 11:37:37.74

QA Filename : \$DISK1:[QUAD27.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : Quad 27a Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 57.349998 Upper Bound : 63.287998

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 60.319565 Std Deviation : 0.989589

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:00	СНК	60.0000)	
2-MAR-2006 05:33	CHK	60.5000)	
3-MAR-2006 05:24	CHK	59.9000		
4-MAR-2006 09:06	CHK	60.2000		
7-MAR-2006 05:22	CHK	59.7000		
8-MAR-2006 05:51	CHK	60.1000)	
9-MAR-2006 05:36	CHK	60.4000		
10-MAR-2006 06:12	CHK	60.400	0	
13-MAR-2006 05:13	CHK	60.300	0	
14-MAR-2006 04:55	CHK	60.200	0	
15-MAR-2006 05:06	CHK	60.200		
16-MAR-2006 06:52	CHK	60.300	0	
17-MAR-2006 05:49	CHK	59.900	0	
18-MAR-2006 07:11	CHK	60.300		
20-MAR-2006 05:03	CHK	60.300	0	
21-MAR-2006 05:03	CHK	60.000	0	
22-MAR-2006 05:34	CHK	60.000	0	
23-MAR-2006 06:12	CHK	60.000		
24-MAR-2006 05:25	CHK	60.600		
25-MAR-2006 08:10	CHK	60.500		
26-MAR-2006 07:13	CHK	60.800	0	

27-MAR-2006 05:07 CHK	60.6000
28-MAR-2006 04:53 CHK	61.0000
29-MAR-2006 05:50 CHK	60.6000
30-MAR-2006 05:32 CHK	59.9000
31-MAR-2006 06:20 CHK	59.9000
3-APR-2006 04:50 CHK	60.3000
4-APR-2006 05:36 CHK	60.8000
5-APR-2006 04:57 CHK	59.8000
6-APR-2006 05:56 CHK	61.0000
7-APR-2006 05:47 CHK	60.5000
10-APR-2006 05:18 CHK	60.4000
11-APR-2006 05:01 CHK	60.3000
12-APR-2006 06:12 CHK	60.0000

Description : Quad 27b Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 53.250000 Upper Bound : 60.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 56.591892 Std Deviation : 1.112864

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:00	СНК	56.1000)	
2-MAR-2006 05:33	CHK	57.5000)	
3-MAR-2006 05:24	CHK	57.0000)	
4-MAR-2006 09:06	CHK	57.0000) iii	
7-MAR-2006 05:22	CHK	56.7000		
8-MAR-2006 05:51	CHK	57.2000		
9-MAR-2006 05:36	CHK	56.6000) i i i	
10-MAR-2006 06:12	CHK	57.200	0	
13-MAR-2006 05:13	CHK	57.300	o iii	

14-MAR-2006 04:55 CHK	56.5000
15-MAR-2006 05:06 CHK	56.7000
16-MAR-2006 06:52 CHK	56.0000
17-MAR-2006 05:49 CHK	56.7000
18-MAR-2006 07:11 CHK	56.3000
20-MAR-2006 05:03 CHK	56.8000
21-MAR-2006 05:03 CHK	56.4000
22-MAR-2006 05:34 CHK	56.5000
23-MAR-2006 06:12 CHK	56.5000
24-MAR-2006 05:25 CHK	55.0000
25-MAR-2006 08:10 CHK	56.7000
26-MAR-2006 07:13 CHK	55.6000
27-MAR-2006 05:07 CHK	57.2000
28-MAR-2006 04:53 CHK	57.0000
29-MAR-2006 05:50 CHK	56.8000
30-MAR-2006 05:32 CHK	56.9000
31-MAR-2006 06:20 CHK	56.3000
3-APR-2006 04:50 CHK	57.0000
4-APR-2006 05:36 CHK	56.6000
5-APR-2006 04:57 CHK	57.2000
6-APR-2006 05:56 CHK	57.2000
7-APR-2006 05:47 CHK	56.9000
10-APR-2006 05:18 CHK	57.7000
11-APR-2006 05:01 CHK	57.0000
12-APR-2006 06:12 CHK	57.0000
Multi-Test Full Report	
Description : Quad 27c Beta %	6Eff
Parameter Units : Para	
	•
Lower/Upper Bounds Test	Parameters
Lower Bound : 49.400002	Upper Bound : 53.560001
Investigate Level: 2.000000	Action Level : 3.000000
Sample Driven N-Sigma To	est Parameters
Start Date : 1-JUN-2005 00:0	0 End Date : 1-JAN-2006 00:00
Mean : 51.482067 Ste	d Deviation: 0.693336
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 05:00 CHK	51.4000

2-MAR-2006 05:33 CHK	51.9000	
3-MAR-2006 05:24 CHK	51.7000	
4-MAR-2006 09:06 CHK	51.3000	İİİ

Quality Assurance Multi-Test Full Report (continued)

Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-MAR-2006 05:22	СНК	51.3000)	· -
8-MAR-2006 05:51	CHK	50.9000		
9-MAR-2006 05:36	CHK	51.6000		
10-MAR-2006 06:12	CHK	51.3000	0	
13-MAR-2006 05:13	CHK	51.1000	0	
14-MAR-2006 04:55	CHK	51.8000	0	
15-MAR-2006 05:06	CHK	51.7000	C	
16-MAR-2006 06:52	CHK	51.3000	0	
17-MAR-2006 05:49	CHK	50.9000) T	
18-MAR-2006 07:11	CHK	51.0000	0	
20-MAR-2006 05:03	CHK	51.3000	(
21-MAR-2006 05:03	CHK	51.3000)	
22-MAR-2006 05:34	CHK	51.4000)	
23-MAR-2006 06:12	CHK	51.1000)	
24-MAR-2006 05:25	CHK	52.1000)	
25-MAR-2006 08:10	CHK	51.1000)	
26-MAR-2006 07:13	CHK	51.4000)	
27-MAR-2006 05:07	CHK	51.5000)	
28-MAR-2006 04:53	CHK	51.8000)	
29-MAR-2006 05:50	CHK	51.6000)	
30-MAR-2006 05:32	CHK	51.6000)	
31-MAR-2006 06:20	CHK	51.6000)	
3-APR-2006 04:50	CHK	51.3000		
4-APR-2006 05:36	CHK	51.3000		
5-APR-2006 04:57	CHK	51.5000		
6-APR-2006 05:56	CHK	51.6000		
7-APR-2006 05:47 (CHK	51.5000		
10-APR-2006 05:18	CHK	50.9000		
11-APR-2006 05:01	CHK	51.5000		
12-APR-2006 06:12	CHK	51.4000		

-- Multi-Test Full Report --

Description : Quad 27d Beta %Eff

Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 56.713795 Std Deviation : 0.481548

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:00	СНК	56.9000		
2-MAR-2006 05:33	CHK	57.1000	ÌÌÌ	
3-MAR-2006 05:24	CHK	57.3000		
4-MAR-2006 09:06	CHK	57.1000	İİİ	
7-MAR-2006 05:22	CHK	56.6000		
8-MAR-2006 05:51	CHK	56.7000		
9-MAR-2006 05:36	CHK	56.9000		
10-MAR-2006 06:12	CHK	57.0000)	
Quality Assurance M	Inlti_Test Full	Report (continued)		Page · A

Quality Assurance Multi-Test Full Report (continued) Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
13-MAR-2006 05:13	СНК	56.8000		
14-MAR-2006 04:55	CHK	57.0000		
15-MAR-2006 05:06	CHK	57.1000		
16-MAR-2006 06:52	CHK	57.0000		
17-MAR-2006 05:49	CHK	56.4000	iii	
18-MAR-2006 07:11	CHK	56.3000		
20-MAR-2006 05:03	CHK	57.1000	iìi	
21-MAR-2006 05:03	CHK	57.0000	iii	
22-MAR-2006 05:34	CHK	56.6000	iii	
23-MAR-2006 06:12	CHK	57.1000	iii	
24-MAR-2006 05:25	CHK	56.3000		
25-MAR-2006 08:10	CHK	57.2000	iii	
26-MAR-2006 07:13	CHK	56.5000		
27-MAR-2006 05:07	CHK	57.1000	- i i i	
28-MAR-2006 04:53	CHK	56.1000	iii	
29-MAR-2006 05:50	CHK	56.8000		
30-MAR-2006 05:32	CHK	57.3000	iii	
31-MAR-2006 06:20	CHK	57.0000	iii	
3-APR-2006 04:50 (CHK	56.9000	1 1 1	
4-APR-2006 05:36 (CHK	57.3000		

5-APR-2006 04:57 CHK	56.7000
6-APR-2006 05:56 CHK	56.7000
7-APR-2006 05:47 CHK	56.9000
10-APR-2006 05:18 CHK	56.8000
11-APR-2006 05:01 CHK	56.6000
12-APR-2006 06:12 CHK	57.1000

Quality Assurance Report. Generated 26-MAY-2006 11:37:44.44

QA Filename : \$DISK1:[QUAD28.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : Quad 28a Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 52.439999 Upper Bound : 59.369999

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 55.908554 Std Deviation : 1.154028

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 05:25 CHK 57.3000 57.6000 2-MAR-2006 05:51 CHK 3-MAR-2006 05:52 CHK 56.8000 57.0000 4-MAR-2006 09:22 CHK 111 7-MAR-2006 05:36 CHK 59.3000 |In| | 59.9000 Ab|Ac| | 8-MAR-2006 06:40 CHK 8-MAR-2006 06:57 CHK 59.5000 Ab|Ac| | 59.7000 Ab|Ac| | 9-MAR-2006 06:07 CHK 59.8000 Ab|Ac| | 10-MAR-2006 06:30 CHK 13-MAR-2006 05:47 CHK 59.4000 Ab|Ac| | 13-MAR-2006 06:01 CHK 59.2000 |In| | 60.2000 Ab|Ac| | 14-MAR-2006 05:31 CHK 59.8000 Ab|Ac| | 14-MAR-2006 05:46 CHK 59.7000 Ab|Ac| | 15-MAR-2006 05:36 CHK 59.6000 Ab|Ac| | 15-MAR-2006 05:52 CHK 59.4000 Ab|Ac| | 16-MAR-2006 07:08 CHK 17-MAR-2006 06:08 CHK 60.0000 Ab|Ac| | 17-MAR-2006 06:26 CHK 59.7000 Ab|Ac| 59.7000 Ab|Ac| | 18-MAR-2006 07:30 CHK 59.9000 Ab|Ac| | 20-MAR-2006 05:25 CHK 60.5000 Ab|Ac| | 21-MAR-2006 05:35 CHK

```
21-MAR-2006 05:49 CHK
                                          60.1000 Ab|Ac| |
                                          59.8000 Ab|Ac| |
22-MAR-2006 06:19 CHK
                                          60.2000 Ab|Ac| |
23-MAR-2006 06:31 CHK
                                          59.7000 Ab|Ac|
24-MAR-2006 05:42 CHK
                                          60.0000 Ab|Ac| |
25-MAR-2006 08:27 CHK
                                          60.3000 Ab|Ac| |
26-MAR-2006 07:29 CHK
27-MAR-2006 05:39 CHK
                                          59.7000 Ab|Ac| |
28-MAR-2006 05:27 CHK
                                          59.6000 Ab|Ac| |
                                          59.6000 Ab|Ac| |
29-MAR-2006 06:07 CHK
30-MAR-2006 05:49 CHK
                                          58.9000
                                                   |In|
31-MAR-2006 06:48 CHK
                                          59.0000
                                                  |In| |
3-APR-2006 05:17 CHK
                                         58.8000 |In| |
4-APR-2006 05:54 CHK
                                         59.9000 Ab|Ac| |
                                         59.5000 Ab|Ac| |
5-APR-2006 05:14 CHK
6-APR-2006 06:19 CHK
                                         59.2000 |In| |
7-APR-2006 06:04 CHK
                                         58.8000
                                                 |In|
10-APR-2006 05:39 CHK
                                         59.2000
                                                 |In| |
Quality Assurance Multi-Test Full Report (continued)
                                                       Page: 2
Measurement Time
                   Sample ID
                               Sample Analyst
                                                 Value LU|SD|UD|BS Rej
11-APR-2006 05:21 CHK
                                         58.5000
                                                 |In|
12-APR-2006 06:46 CHK
                                         59.0000
                                                  |In| |
-- Multi-Test Full Report --
             : Quad 28b Beta %Eff
Description
Parameter Units:
                          Parameter Type: Generic
  ---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 48.619999
                              Upper Bound : 56.290001
Investigate Level: 2.000000
                             Action Level: 3.000000
  ---- Sample Driven N-Sigma Test Parameters ----
Start Date
            : 1-JUL-2005 00:00 End Date
                                        : 1-JAN-2006 00:00
Mean
            : 52.463158
                           Std Deviation: 1.277917
Measurement Time
                   Sample ID
                               Sample Analyst
                                                 Value LU|SD|UD|BS Rej
1-MAR-2006 05:25 CHK
                                         52.2000 | | |
2-MAR-2006 05:51 CHK
                                         52.9000
3-MAR-2006 05:52 CHK
                                         52.1000
```

4-MAR-2006 09:22 CHK	52.5000	
7-MAR-2006 05:36 CHK	54.1000	
8-MAR-2006 06:40 CHK	54.6000	111
8-MAR-2006 06:57 CHK	No Value	
9-MAR-2006 06:07 CHK	54.0000	
10-MAR-2006 06:30 CHK	54.2000	
13-MAR-2006 05:47 CHK	54.1000	111
13-MAR-2006 06:01 CHK	No Value	
14-MAR-2006 05:31 CHK	54.1000	
14-MAR-2006 05:46 CHK	No Value	
15-MAR-2006 05:36 CHK	54.2000	
15-MAR-2006 05:52 CHK	No Value	
16-MAR-2006 07:08 CHK	54.0000	
17-MAR-2006 06:08 CHK	53.7000	
17-MAR-2006 06:26 CHK	No Value	
18-MAR-2006 07:30 CHK	54.5000	
20-MAR-2006 05:25 CHK	54.3000	
21-MAR-2006 05:35 CHK	54.4000	
21-MAR-2006 05:49 CHK	No Value	
22-MAR-2006 06:19 CHK	53.9000	
23-MAR-2006 06:31 CHK	53.5000	
24-MAR-2006 05:42 CHK	53.9000	
25-MAR-2006 08:27 CHK	54.4000	
26-MAR-2006 07:29 CHK	54.4000	
27-MAR-2006 05:39 CHK	54.2000	
28-MAR-2006 05:27 CHK	53.9000	
29-MAR-2006 06:07 CHK	54.4000	
30-MAR-2006 05:49 CHK	54.1000	
31-MAR-2006 06:48 CHK	54.2000	
3-APR-2006 05:17 CHK	54.3000	
4-APR-2006 05:54 CHK	53.9000	
5-APR-2006 05:14 CHK	54.1000	
√6-APR-2006 06:19 CHK	54.3000	
Ovality Assurance Multi Test Full E) amount (a amotimiza d)	T

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-APR-2006 06:04	СНК	53.7000		
10-APR-2006 05:39	CHK	54.2000		
11-APR-2006 05:21	CHK	53.8000		
12-APR-2006 06:46	CHK	54.0000		

⁻⁻ Multi-Test Full Report --

Description : Quad 28c Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 50.277000 Upper Bound : 56.939999

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 53.701317 Std Deviation : 1.141510

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:25	СНК	53.9000		30.00
2-MAR-2006 05:51	CHK	54.7000	iii	
3-MAR-2006 05:52	CHK	53.5000		
4-MAR-2006 09:22	CHK	52.8000		
7-MAR-2006 05:36	CHK	55.2000		
8-MAR-2006 06:40	CHK	55.3000		
8-MAR-2006 06:57	CHK	No Value		
9-MAR-2006 06:07	CHK	55.8000		
10-MAR-2006 06:30	CHK	55.2000)	
13-MAR-2006 05:47	CHK	55.1000		
13-MAR-2006 06:01	CHK	No Value		
14-MAR-2006 05:31	CHK	55.2000		
14-MAR-2006 05:46	CHK	No Value		
15-MAR-2006 05:36	CHK	55.7000		
15-MAR-2006 05:52	CHK	No Value		
16-MAR-2006 07:08	CHK	55.0000		
17-MAR-2006 06:08	CHK	55.2000		
17-MAR-2006 06:26	CHK	No Value		
18-MAR-2006 07:30	CHK	55.1000		
20-MAR-2006 05:25	CHK	55.6000		
21-MAR-2006 05:35	CHK	55.5000		
21-MAR-2006 05:49	CHK	No Value		
22-MAR-2006 06:19	CHK	55.4000		
23-MAR-2006 06:31	CHK	55.5000		
24-MAR-2006 05:42	CHK	55.3000		
25-MAR-2006 08:27	CHK	55.6000		
26-MAR-2006 07:29	CHK	55.3000		
27-MAR-2006 05:39	CHK	54.7000		

28-MAR-2006 05:27 CHK	55.8000
29-MAR-2006 06:07 CHK	55.4000
30-MAR-2006 05:49 CHK	55.4000
31-MAR-2006 06:48 CHK	55.2000
3-APR-2006 05:17 CHK	55.4000
4-APR-2006 05:54 CHK	55.8000

Quality Assurance Multi-Test Full Report (continued) Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
5-APR-2006 05:14 C	 НК	55.3000		
6-APR-2006 06:19 Cl		55.3000		
7-APR-2006 06:04 C	HK	55.3000	iii	
10-APR-2006 05:39 C	CHK	55.3000		
11-APR-2006 05:21 C	CHK	55.2000		
12-APR-2006 06:46 C	CHK	55.5000		

-- Multi-Test Full Report --

Description : Quad 28d Beta %Eff

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 52.821712 Std Deviation : 1.434989

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:25	СНК	52.0000		
2-MAR-2006 05:51	CHK	52.8000		
3-MAR-2006 05:52	CHK	50.5000		
4-MAR-2006 09:22	CHK	51.8000		
7-MAR-2006 05:36	CHK	53.9000	ΪİΙ	
8-MAR-2006 06:40	CHK	54.1000		
8-MAR-2006 06:57	CHK	No Value		
9-MAR-2006 06:07	CHK	54.1000	111	
10-MAR-2006 06:30	CHK	54.7000)	
13-MAR-2006 05:47	CHK	54.4000)	

13-MAR-2006 06:01	CHK	No Value	
14-MAR-2006 05:31	CHK	54.0000	
14-MAR-2006 05:46	CHK	No Value	
15-MAR-2006 05:36	CHK	54.5000	
15-MAR-2006 05:52	CHK	No Value	
16-MAR-2006 07:08	CHK	54.4000	
17-MAR-2006 06:08	CHK	54.2000	
17-MAR-2006 06:26	CHK	No Value	
18-MAR-2006 07:30	CHK	54.3000	
20-MAR-2006 05:25	CHK	53.9000	
21-MAR-2006 05:35	CHK	53.6000	
21-MAR-2006 05:49	CHK	No Value	
22-MAR-2006 06:19	CHK	55.0000	
23-MAR-2006 06:31	CHK	54.4000	111
24-MAR-2006 05:42	CHK	53.8000	
25-MAR-2006 08:27	CHK	54.0000	
26-MAR-2006 07:29	CHK	53.9000	
27-MAR-2006 05:39	CHK	53.8000	
28-MAR-2006 05:27	CHK	53.9000	
29-MAR-2006 06:07	CHK	54.3000	
30-MAR-2006 05:49	CHK	54.9000	
31-MAR-2006 06:48	CHK	54.7000	
0 11 1			_

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
3-APR-2006 05:17	CHK	53.4000	 	
4-APR-2006 05:54	CHK	54.2000	iii	
5-APR-2006 05:14	CHK	54.4000	iii	
6-APR-2006 06:19	CHK	54.2000	ÍÌÌ	
7-APR-2006 06:04	CHK	53.9000	ÍÌ	
10-APR-2006 05:39	CHK	54.2000		
11-APR-2006 05:21	CHK	53.9000	iii	
12-APR-2006 06:46	CHK	54.1000	iii	

Quality Assurance Report. Generated 26-MAY-2006 11:37:54.89

QA Filename : \$DISK1:[QUAD31.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : QUAD 31A BETA %EFF

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 59.468987 Std Deviation : 0.872065

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:38	СНК	58.5000		
2-MAR-2006 06:04	CHK	58.9000		
3-MAR-2006 06:25	CHK	58.2000		
3-MAR-2006 06:43	CHK	No Value		
6-MAR-2006 05:31	CHK	58.7000		
7-MAR-2006 05:49	CHK	60.1000		
8-MAR-2006 07:12	CHK	59.0000		
9-MAR-2006 06:25	CHK	59.6000		
10-MAR-2006 06:51	CHK	60.3000)	
13-MAR-2006 06:56	CHK	58.5000)	
14-MAR-2006 05:55	CHK	60.000)	
15-MAR-2006 06:03	CHK	59.7000)	
16-MAR-2006 07:22	CHK	59.6000)	
17-MAR-2006 06:49	CHK	59.0000)	
18-MAR-2006 07:52	CHK	59.4000)	
20-MAR-2006 05:58	CHK	60.3000)	
21-MAR-2006 06:02	CHK	58.6000)	
22-MAR-2006 06:37	CHK	58.7000)	
23-MAR-2006 06:52	CHK	59.3000)	
24-MAR-2006 05:54	CHK	60.5000	$ \cdot $	
25-MAR-2006 08:50	CHK	59.9000) [

file:///P /Transfer/qa1_gpc31_26-may-2006	-11375585.txt
26-MAR-2006 07:46 CHK	60.4000
27-MAR-2006 05:53 CHK	60.9000
28-MAR-2006 05:38 CHK	60.7000
29-MAR-2006 06:21 CHK	58.4000
30-MAR-2006 05:59 CHK	59.2000
31-MAR-2006 05:29 CHK	59.2000
3-APR-2006 05:28 CHK	59.0000
4-APR-2006 06:16 CHK	59.9000
5-APR-2006 05:48 CHK	59.3000
6-APR-2006 06:37 CHK	57.9000
7-APR-2006 05:14 CHK	59.3000
10-APR-2006 05:50 CHK	59.1000
11-APR-2006 05:36 CHK	60.5000
12-APR-2006 07:03 CHK	57.3000 In
Multi-Test Full Report	
Description : QUAD 31B	BETA %EFF
Parameter Units:	Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 51.849998 Upper Bound : 57.303001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00 Start Date

Std Deviation: 0.908270 Mean : 54.579086

Quality Accurance Multi Test Full Penert (continued) Page : 2	Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
	Quality Assurance Multi-Test Full Report (continued)				 Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:38	CHK	54.6000)	
2-MAR-2006 06:04	CHK	54.1000)	
3-MAR-2006 06:25	CHK	52.9000		
3-MAR-2006 06:43	CHK	No Value		
6-MAR-2006 05:31	CHK	54.7000		
7-MAR-2006 05:49	CHK	53.7000		
8-MAR-2006 07:12	CHK	55.6000		
9-MAR-2006 06:25	CHK	54.7000		

10-MAR-2006 06:51 CHK	55.8000
13-MAR-2006 06:56 CHK	54.7000
14-MAR-2006 05:55 CHK	54.7000
15-MAR-2006 06:03 CHK	55.0000
16-MAR-2006 07:22 CHK	56.1000
17-MAR-2006 06:49 CHK	55.3000
18-MAR-2006 07:52 CHK	55.1000
20-MAR-2006 05:58 CHK	55.4000
21-MAR-2006 06:02 CHK	54.1000
22-MAR-2006 06:37 CHK	55.1000
23-MAR-2006 06:52 CHK	55.0000
24-MAR-2006 05:54 CHK	55.6000
25-MAR-2006 08:50 CHK	54.3000
26-MAR-2006 07:46 CHK	55.4000
27-MAR-2006 05:53 CHK	56.0000
28-MAR-2006 05:38 CHK	55.3000
29-MAR-2006 06:21 CHK	53.3000
30-MAR-2006 05:59 CHK	55.7000
31-MAR-2006 05:29 CHK	54.6000
3-APR-2006 05:28 CHK	55.8000
4-APR-2006 06:16 CHK	54.8000
5-APR-2006 05:48 CHK	54.9000
6-APR-2006 06:37 CHK	53.3000
7-APR-2006 05:14 CHK	55.1000
10-APR-2006 05:50 CHK	54.2000
11-APR-2006 05:36 CHK	55.3000
12-APR-2006 07:03 CHK	55.6000

-- Multi-Test Full Report --

Description : QUAD 31C BETA %EFF

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 47.715000 Upper Bound : 52.109001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 49.911842 Std Deviation : 0.732404

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 05:38	CHK	48.9000	
2-MAR-2006 06:04	CHK	49.9000	
3-MAR-2006 06:25	CHK	47.7000	Be Ac

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
3-MAR-2006 06:43	CHK	50.3000		
6-MAR-2006 05:31	CHK	50.0000		
7-MAR-2006 05:49	CHK	50.6000	iii	
8-MAR-2006 07:12	CHK	50.0000		
9-MAR-2006 06:25	CHK	50.3000	iii	
10-MAR-2006 06:51	CHK	50.3000)	
13-MAR-2006 06:56	CHK	49.2000)	
14-MAR-2006 05:55	CHK	50.0000) [[[
15-MAR-2006 06:03	CHK	50.1000		
16-MAR-2006 07:22	CHK	50.4000)	
17-MAR-2006 06:49	CHK	49.1000		
18-MAR-2006 07:52	CHK	50.5000		
20-MAR-2006 05:58	CHK	50.6000)	
21-MAR-2006 06:02	CHK	49.6000		
22-MAR-2006 06:37	CHK	49.1000)	
23-MAR-2006 06:52	CHK	49.9000)	
24-MAR-2006 05:54	CHK	49.9000		
25-MAR-2006 08:50	CHK	48.6000		
26-MAR-2006 07:46	CHK	49.1000		
27-MAR-2006 05:53	CHK	50.1000		
28-MAR-2006 05:38	CHK	49.7000		
29-MAR-2006 06:21	CHK	49.3000		
30-MAR-2006 05:59	CHK	50.1000		
31-MAR-2006 05:29	CHK	50.3000		
3-APR-2006 05:28 (CHK	49.7000		
4-APR-2006 06:16 (CHK	50.0000	111	
5-APR-2006 05:48 (CHK	50.4000		
6-APR-2006 06:37 (CHK	50.1000		
7-APR-2006 05:14 (CHK	49.6000		
10-APR-2006 05:50	CHK	50.3000		
11-APR-2006 05:36	CHK	49.7000		
12-APR-2006 07:03	CHK	49.1000		

⁻⁻ Multi-Test Full Report --

Description : QUAD 31D BETA %EFF

Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 54.005733 Std Deviation : 0.922110

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:38	CHK	54.1000		
2-MAR-2006 06:04	CHK	52.3000		
3-MAR-2006 06:25	CHK	52.3000		
3-MAR-2006 06:43	CHK	No Value		
6-MAR-2006 05:31	CHK	53.2000		
7-MAR-2006 05:49	CHK	53.6000	i i i	
Quality Assurance M	ulti-Test Full	Report (continued)]	Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LUISDIUDIRS Rei

8-MAR-2006 07:12 CHK	53.5000
9-MAR-2006 06:25 CHK	53.8000
10-MAR-2006 06:51 CHK	54.6000
13-MAR-2006 06:56 CHK	52.7000
14-MAR-2006 05:55 CHK	54.4000
15-MAR-2006 06:03 CHK	54.3000
16-MAR-2006 07:22 CHK	54.0000
17-MAR-2006 06:49 CHK	53.8000
18-MAR-2006 07:52 CHK	53.3000
20-MAR-2006 05:58 CHK	54.7000
21-MAR-2006 06:02 CHK	52.9000
22-MAR-2006 06:37 CHK	53.2000
23-MAR-2006 06:52 CHK	53.9000
24-MAR-2006 05:54 CHK	54.9000
25-MAR-2006 08:50 CHK	53.6000
26-MAR-2006 07:46 CHK	53.9000
27-MAR-2006 05:53 CHK	54.4000
28-MAR-2006 05:38 CHK	54.5000
29-MAR-2006 06:21 CHK	53.4000

30-MAR-2006 05:59 CHK	54.0000
31-MAR-2006 05:29 CHK	54.4000
3-APR-2006 05:28 CHK	54.9000
4-APR-2006 06:16 CHK	54.0000
5-APR-2006 05:48 CHK	53.8000
6-APR-2006 06:37 CHK	54.4000
7-APR-2006 05:14 CHK	53.9000
10-APR-2006 05:50 CHK	54.3000
11-APR-2006 05:36 CHK	54.2000
12-APR-2006 07:03 CHK	54.3000

Quality Assurance Report.

Generated 26-MAY-2006 11:38:02.02

QA Filename

: \$DISK1:[QUAD32.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description

: QUAD 32A BETA %EFF

Parameter Units:

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 52.900002

Upper Bound : 58.599998

Investigate Level: 2.000000

Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean

: 55.764473

Std Deviation: 0.950525

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1 3 4 4 D 200 C 05 5 C	CETY	# C 4 0 0 0		
1-MAR-2006 05:56		56.1000		
2-MAR-2006 06:44	CHK	56.8000		
3-MAR-2006 06:44	CHK	57.0000		
6-MAR-2006 06:01	CHK	57.4000		
7-MAR-2006 06:06	CHK	57.0000		
8-MAR-2006 07:50	CHK	57.3000	İİİ	
9-MAR-2006 06:58	CHK	58.3000	In	
10-MAR-2006 07:33	CHK	58.3000	In	
13-MAR-2006 06:57	CHK	57.4000		
14-MAR-2006 06:19	CHK	56.3000		
15-MAR-2006 06:33	CHK	57.8000) In	
16-MAR-2006 07:41	CHK	56.9000)	
17-MAR-2006 07:24	CHK	57.2000		
18-MAR-2006 08:11	CHK	57.4000		
20-MAR-2006 06:14	CHK	56.2000		
21-MAR-2006 06:37	CHK	56.0000		
22-MAR-2006 06:57	CHK	56.8000		
23-MAR-2006 07:27	CHK	56.1000		
24-MAR-2006 06:26	CHK	57.0000)	
25-MAR-2006 08:51	CHK	57.4000		
26-MAR-2006 07:47	CHK	57.3000) iii	
			1 1 1	

1 _01 1			
27-MAR-2006 06:23 CHK	57.1000	111	
28-MAR-2006 06:06 CHK	56.9000		
29-MAR-2006 07:10 CHK	56.4000		
30-MAR-2006 06:30 CHK	56.7000		
31-MAR-2006 06:07 CHK	56.5000		
/3-APR-2006 05:47 CHK	56.5000		
√4-APR-2006 06:58 CHK	56.1000		
5-APR-2006 06:05 CHK	56.6000		
6-APR-2006 06:54 CHK		1 1	
7-APR-2006 05:32 CHK	56.2000		
10-APR-2006 06:09 CHK	56.8000		. I
	52,5000		
10-APR-2006 06:46 CHK	56.1000		
11-APR-2006 05:53 CHK	57.0000		
12-APR-2006 07:21 CHK	57.3000		
Multi-Test Full Report			
D ' ' ' OHAD 30D DETE	4.0/DDD		
Description : QUAD 32B BET			
Parameter Units : Para	meter Type: Generic		
Lower/Upper Bounds Test I			
Lower Bound : 48.599998	Upper Bound : 55.09	99998	
Investigate Level: 2.000000	Action Level · 3 0000	00	
investigate Devel . 2.000000	Action Level . 5.0000	00	
Sample Driven N-Sigma Te	ct Parameters		
Start Date : 1-JUL-2005 00:00		1 2006	00.00
	Deviation: 1.082158	1-2000	00.00
Mean . 31.870121 Sig	1 Deviation . 1.082138		
Measurement Time Sample ID	Sample Analyst V	⁷ alue	LU SD UD BS Rej
			
Quality Assurance Multi-Test Full	Report (continued)		Page: 2
M are a tro			
Measurement Time Sample ID	Sample Analyst V	alue	LU SD UD BS Rej
	51.5000		
1-MAR-2006 05:56 CHK	51.5000		
2-MAR-2006 06:44 CHK	51.8000	1 1 1	
3-MAR-2006 06:44 CHK	51.9000	1 1 1	
6-MAR-2006 06:01 CHK	51.9000		
7-MAR-2006 06:06 CHK	52.7000		
8-MAR-2006 07:50 CHK	52.4000		
9-MAR-2006 06:58 CHK	52.5000		
10-MAR-2006 07:33 CHK	52.8000		

13-MAR-2006 06:57 CHK	50.9000
14-MAR-2006 06:19 CHK	51.2000
15-MAR-2006 06:33 CHK	52.8000
16-MAR-2006 07:41 CHK	51.1000
17-MAR-2006 07:24 CHK	51.9000
18-MAR-2006 08:11 CHK	52.2000
20-MAR-2006 06:14 CHK	51.4000
21-MAR-2006 06:37 CHK	51.1000
22-MAR-2006 06:57 CHK	51.4000
23-MAR-2006 07:27 CHK	50.9000
24-MAR-2006 06:26 CHK	51.3000
25-MAR-2006 08:51 CHK	51.4000
26-MAR-2006 07:47 CHK	51.6000
27-MAR-2006 06:23 CHK	51.7000
28-MAR-2006 06:06 CHK	51.7000
29-MAR-2006 07:10 CHK	51.8000
30-MAR-2006 06:30 CHK	51.5000
31-MAR-2006 06:07 CHK	50.5000
3-APR-2006 05:47 CHK	52.2000
√4-APR-2006 06:58 CHK	51.0000
5-APR-2006 06:05 CHK	51.2000
6-APR-2006 06:54 CHK	51.1000
7-APR-2006 05:32 CHK	52.2000
10-APR-2006 06:09 CHK	47.9000 Be Ac
10-APR-2006 06:46 CHK	50.6000
11-APR-2006 05:53 CHK	52.1000
12-APR-2006 07:21 CHK	51.7000

-- Multi-Test Full Report --

Description : QUAD 32C BETA %EFF

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 51.599998 Upper Bound : 57.400002

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 54.507454 Std Deviation : 0.976125

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

		· -
1-MAR-2006 05:56 CHK	54.1000	
2-MAR-2006 06:44 CHK	54.1000	111
3-MAR-2006 06:44 CHK	54.9000	
Quality Assurance Multi-Test Full Rep	port (continued)	Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 06:01	СНК	55.2000)	
7-MAR-2006 06:06	CHK	55.3000		
8-MAR-2006 07:50	CHK	55.4000)	
9-MAR-2006 06:58	CHK	55.6000)	
10-MAR-2006 07:33	CHK	55.8000	0	
13-MAR-2006 06:57	CHK	54.800	0	
14-MAR-2006 06:19	CHK	54.100	0	
15-MAR-2006 06:33	CHK	55.6000	0	
16-MAR-2006 07:41	CHK	54.7000	0	
17-MAR-2006 07:24	CHK	55.1000	0	
18-MAR-2006 08:11	CHK	55.4000	0	
20-MAR-2006 06:14	CHK	54.5000	0	
21-MAR-2006 06:37	CHK	54.0000	0	
22-MAR-2006 06:57	CHK	54.6000) C	
23-MAR-2006 07:27	CHK	55.3000	C	
24-MAR-2006 06:26	CHK	54.3000	1 0	
25-MAR-2006 08:51	CHK	54.8000	1	
26-MAR-2006 07:47	CHK	55.0000)	
27-MAR-2006 06:23	CHK	54.8000)	
28-MAR-2006 06:06	CHK	54.1000)	
29-MAR-2006 07:10	CHK	54.5000)	
30-MAR-2006 06:30	CHK	54.7000)	
31-MAR-2006 06:07	CHK	53.3000)	
3-APR-2006 05:47 (53.6000		
4-APR-2006 06:58 (53.6000		
5-APR-2006 06:05 (CHK	54.4000		
6-APR-2006 06:54 (CHK	55.2000		
7-APR-2006 05:32 (CHK	56.2000		•
10-APR-2006 06:09	CHK	50.1000	Be Ac	
10-APR-2006 06:46		54.5000		
11-APR-2006 05:53	_	55.4000		
12-APR-2006 07:21	CHK	55.2000		

⁻⁻ Multi-Test Full Report --

Description : QUAD 32D BETA %EFF

Parameter Units: Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 50.599998 Upper Bound : 55.700001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 53.184967 Std Deviation : 0.861438

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 05:56	СНК	52.9000	 }	
2-MAR-2006 06:44		53.1000	1 1 1	
3-MAR-2006 06:44	CHK	53.1000		
6-MAR-2006 06:01	CHK	54.2000		
7-MAR-2006 06:06	CHK	53.9000	i i i	
8-MAR-2006 07:50	CHK	53.9000	iii	
Quality Assurance M	lulti-Test Full	Report (continued)		Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
9-MAR-2006 06:58	СНК	54.2000)	
10-MAR-2006 07:33	CHK	54.200	0	
13-MAR-2006 06:57	CHK	52.800	0	
14-MAR-2006 06:19	CHK	53.300	0	
15-MAR-2006 06:33	CHK	54.500		
16-MAR-2006 07:41	CHK	53.000	0	
17-MAR-2006 07:24	CHK	53.200		
18-MAR-2006 08:11	CHK	53.400	0	
20-MAR-2006 06:14	CHK	53.000	0	
21-MAR-2006 06:37	CHK	53.300	0	
22-MAR-2006 06:57	CHK	52.700	0	
23-MAR-2006 07:27	CHK	53.300	0	
24-MAR-2006 06:26	CHK	52.700	0	
25-MAR-2006 08:51	CHK	53.4000	0	
26-MAR-2006 07:47	CHK	52.5000	0	
27-MAR-2006 06:23	CHK	53.000	0	
28-MAR-2006 06:06	CHK	52.7000	0	
29-MAR-2006 07:10	CHK	53.8000	0	
30-MAR-2006 06:30	CHK	53.1000	0	

31-MAR-2006 06:07 CHK	51.6000
3-APR-2006 05:47 CHK	53.2000
√4-APR-2006 06:58 CHK	52.0000
5-APR-2006 06:05 CHK	52.9000
6-APR-2006 06:54 CHK	53.5000
7-APR-2006 05:32 CHK	54.4000
10-APR-2006 06:09 CHK	49.5000 Be Ac
10-APR-2006 06:46 CHK	53.0000
11-APR-2006 05:53 CHK	55.1000 In
12-APR-2006 07:21 CHK	53.3000

RADIUM 226 SAMPLE AND QC DATA

SEVERN STL EL PROPERTO DE

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

4/11/2006 4:56:17 PM

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6060342; RRA2267 Ra-226 by ASC-7

SDG, Matrix:

31025; FILTER

1	.0	COC
u	·v	

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yeşr No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A

No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yeş No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

2.4 Does the Worksheets include a Tracer Vial label for each sample?

No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

3.5 Are the sample yields and MDAs within contract limits?

No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A

4.2 Were analysis volumes entered correctly?

No N/A Yes No N/A

4.3 Were Yields entered correctly?

No N/A

4.4 Were spectra reviewed/meet contractual requirements?

No N/A

4.5 Were raw counts reviewed for anomalies?

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

5.2 Are all required forms filled out?

Yes No N/A

5.3 Was the correct methodology used?

5.4 Was transcription checked?

Yeşr No N/A No N/A Yes

5.5 Were all calculations checked at a minimum frequency?

No N/A Yes

5.6 Are worksheet entries complete and correct?

No N/A

6.0 Comments on any No response:

First Level Review

· anderson

STL Richland



Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 4060342

Review Item A. Sample Analysis 1. Are the sample yields within acceptance criteria? 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result < the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?	Yes (V)	No (√)	
1. Are the sample yields within acceptance criteria? 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			
Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			
3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria?			1
Contract Detection Limit? Does the blank result meet the Contract criteria?		4	
2 Does the blank result meet the Contract criteria?			}
2. Does the blank result meet the Contract criteria!			
		1	
3. Is the blank result < the Contract Detection Limit?		<u> </u>	
4. Is the blank result > the Contract Detection Limit but the sample		}	1
result < the Contract Detection Limit?		 	
5. Is the LCS recovery with contract acceptance criteria?		-	
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			1
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other	<u> </u>	1	
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?		- 	
4 Was transcription checked?	//		-
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			

Sandrag Brown and Caldwell Brown & Bra-22e/228 Prace Solis, SaperCoops TE Ban-139 by Mai & Par-22e by Alpha Scint 7 day ingrow Sept DT/Tm Tech: 40 4/03/06 Sept DT/Tm Tech: 4	3/31/2006 10:49:4	9:49 AM Sample Preparation/Analysis							Balance	ld:1120373922,11	20403183	
Sept Policy Policy Policy Policy Policy Policy Policy Policy Prep Tech: HansenM, HaackS			, Brown &	TE Ba-133 by Nai & Ba-226 by Alpha Scint 7 day ingrow						· · · · · · · · · · · · · · · · · · ·		
Total Amt Total Amt Acidfled/Unit Initial Aliquot Adij Amt Amt/Unit Adij Amt Amt/Unit Adij Amt Amt/Unit Amt/Un			nCl/sam			unto: E 621	74		-)/ P 3	
Work Order, Lot. Total Amt Amt	SEQ Batch, Test: 60	60344, BXTF	pousuiii	·þι	FIVI, QU	10te: Eu , 63 i	74		•			
Sample Date Junit Additified AmtUnit (Un-Acidified) Prep Date Time Min Id (24in) Circle InitiDate									<u> </u>	ech: HansenM,Haa	ck\$	
10 10 10 10 10 10 10 10						II				CR Analyst, Init/Date	Comments:	
			503.56sa	151.81g,in	0.2511g			G-5	1623	4/3/20060	J.	
10066			***************************************		7.6000	=	···		***************************************	,		
10066			Ва	133 -	→ 7.550	7.5	5/7.6 : 99	17.	4-5-61	A 13:30		
D2/05/2006 06:00 AmtRec: FOLDER #Containers: 1 ** Scr. Alpha: R H Beta:		. d + 0.0 Ty			1.0066							
2 HX810-1-AC	02/05/2006 06:00		Amt ^r	Rec: FOLDER	#Containers: 1	*		Scr:			Poto.	
1		0.833sa									Dela.	
7.050 - 7.05 7.78 - 9.7					7 7280=	03/31/06		4 7	(Ψ ⊆)	11.1		
10 10 10 10 10 10 10 10				`	 _		05/7728	- 91/.	4-5-6 N	л 13:30		
Amilian Amil		******************										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02/05/2006 06:35		Amti	Rec: FOLDER	#Containers: 1			Scr:		250	Beta:	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			500.94sa	150.82g,in	0.2508g			G7	1624	4/3/06020		
0. 8685 - H-10-(0 M 11:51 02/05/2006 07:15			·	***	· 	U3/31/Ua		,	·			
02/05/2006 07:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: 3MA Beta: 4 HX81T-1-AC 0.833sa 508.67sa 150.37g,in 0.2462g RATA21349 J66 1656 4/2/1679 7.5574 03/31/06 7.405 4-5-6 M 13:30 1,0206 4-10-0 M 11:50	111 1 II 8 IBB I 1 I I I I I I I I I I I I I I I I	######################################					[/] 7.5875 =	115).	4.5.6	<u> </u>	J	
02/05/2006 07:15 AmtRec: FOLDER #Containers: 1 4 HX81T-1-AC		•			0.8685-			·	4-10-6	M 11:51		
J6B270158-4-SAMP 7.5.5.74 = 03/31/06 7.405 - 4-5-6 M 13:30 1.0206 - 4-10-0 M 11:50	02/05/2006 07:15		Amti	Rec: FOLDER	#Containers: 1			Scr:		3MA	Beta:	
7.5574. 000100 7.405 - 4-5-6 M 13:30 1,0206 - 4-10-0M 11:50			508.67sa	150.37g,in	0.2462g			G6	1056 4,	12/16TR		
1,0206 - 4-10-6M 11:50			·	*********	7.5574	03/31/06		7 -			**** ********************************	
1,0206 - 4-10-6M 11:50					7.405	<u></u>			4-5-6	M 13:30	<u> </u>	
. •					1,0206				•			
	02/05/2006 07:45		Amt/	Rec: FOLDER	#Containers: 1			Scr:		. *		
STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePro		•				Page 1	ISV - Ir	nsufficient Volun	ne for Analysis		VO Cnt: 4	

3/31/2006 10:49	50 AM		· <u></u>	Sample Prepa	aration/Ana	lysis	 	Balance	ld:1120373922,112	0373922,1120
536403, Brown a Caldwell		, Brown &		5/228 PrpRC5016, 3 by NaI & Ra-226		7 day ingrow		Pipe	et #:	
Report Due: 03/	31/2006			01 STANDARD TEST SET				Sep1 DT/Tm Te	ech:	
Batch: 6060342	FILTER	pCi/sam	ıpl	PM, Q	uote: EJ , 631	74		Sep2 DT/Tm Te	ech:	
SEQ Batch, Test: 60	70U344, DXTF			(111(11	61111 1 9119 6111			Prep To	ech: HansenM,Haad	:kS
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
HX81V-1-AC	0.833sa	501.14sa	151.30g,in	0.2515g	RATA21350		G8	1656	4/3/0602	!
6B270158-5-SAMF			***********	76076	03/31/06				·	
				#55482	<u> 27 · </u>				13:30	
,				0.924			4-	10-6 M	1:50	-,
02/05/2006 08:15		Ami	tRec: FOLDER	#Containers: 1			Scr:	Alpha:	55A,	Beta:
HX81W-1-AC	0.833sa	500.55sa	150.83g,in	0.251g	RATA21351	-	G4	1657	4/3/06070	
6B270158-6-SAMI				7.5574:	03/31/06		4 1			
				7.058 -	-		4-8	5-6M 1	3:30	
	,	***************************************		1.0708	′ _		4-	10-6M 1	1:51	
02/05/2006 08:40		Am:	tRec: FOLDER	#Containers: 1		·	Ser:	Alpha:	8HB	Beta:
7 HX81X-1-AC	0.833sa	500.96sa	150.62g,in	0.2505g	RATA21352		6-11	1657	4/3/06020	****
J6B270158-7-SAM				7.5675	03/31/06		9/	162 /		
			W L & B E & E W F P P P P P P P P P P P P P P P P P P	7.714	7		4	-5-6 M	13:30	
				0.9810)		دا	r-10-6M	11:50	~~~~~~
02/05/2006 06:10	•••••	Am	tRec: FOLDER	#Containers: 1			Scr.	Alpha:	9RC	Beta:
8 HX811-1-AC	0.833sa	501.81sa	150.19g,in	0.2493g	RATA21353		G5	11.5	4/3/06012	
J6B270158-8-SAM			v	7 (017)	03/31/06		9	1657		
		· · · · · · · · · · · · · · · · · · ·		8.058	/		4	-6-6 M	(B:30	
				0,945	.,	4. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.			M 11:46	
02/05/2006 06:15		Am	ntRec: FOLDER	#Containers: 1			Scr:		3MA	Beta:
STL Richland	•			s1 - Sep1, s2 - Sep2	Page 2	ISV - I	insufficient Volu	me for Analysis		VO Cnt: 8
Bichland Wa	nd - Pren D	r - Reference Dt. e	ec-Enrichment Cel	I, ct-Cocktailed Added	1				Lteb ⁻	_SamplePrep v4.6

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3/31/2006 10:49: 536403, Brown ar Caldwell Report Due: 03/	nd Caldwell	, Brown 8	TE Ba-13	Sample Prepared Prepared Propagation State Propa	SepRC5005				pet #:	,1120373922,1120
Batch: 6060342 SEQ Batch, Test: 60		pCi/sam	ıpl	PM, Q	uote: EJ , 631	74		Sep2 DT/Tm 1		
DEG Datch, Test. 60	1003#4, BXTE	•		111111	BARIA KRANK BARA	 	118 [12] (18)	-	Tech: HansenM,H	aackS
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, , Init/Date	Comments:
9 HX812-1-AC J6B270158-9-SAMP		507.36sa	1 51.06g,in	0.248g 7.5976	RATA21354 03/31/06	<u> </u>	G5	1738	4/3/06020	_
				7.121 -				4.5-1	QM 13:5	<u> </u>
				1.0669			***************************************		64 12.3	
02/05/2006 06:05		Arnti	Rec: FOLDER	#Containers: 1			Scr:		CSA	Beta:
10HX813-1-AC J6B270158-10-SAMF		500.90sa	150.63g,in	0.2505g 7. 5775	RATA21355 03/31/06		G4		4/3/06070	
13.6 10 76 10 647 11 11 12 11 11 12 410	######################################			7.467			4844	4-5-(om 13:5	50
				1.0148			***************************************	4-10-(
02/05/2006 06:40	· · · · · · · · · · · · · · · · · · ·	AmtF	Rec: FOLDER	#Containers: 1		_	Scr:	Alpha:	DV.D	Beta:
11 HX814-1-AC J6B270158-11-SAMF		502.44sa	150.65g,in	0.2498g 7.5474=	RATA21356 03/31/06		<i>G7</i>	1739		ð
	######################################		***************************************	8.386	<i>,</i>			4-5	-6 n 13	:50
 				0.9000					D-6M 13	
02/05/2006 07:20		AmtF	Rec: FOLDER	#Containers: 1			Scr:	Alpha:	EHA	Beta:
12HX815-1-AC J6B270158-12-SAMF		501.00sa	151.27g,in	0.2515g 7.6076 =	RATA21357 03/31/06		GL	1739	4/3/0600	
	J83) F 1 61 8 8 8 1	·		7.901	·		***************************************		5-6 M/3	
02/05/2006 07:50		AmtF	Rec: FOLDER	#Containers: 1			Ser:	Alpha:	GSB	Beta:
					·					
STL Richland I Richland Wa.		nt, fi - Final Amt, di r - Reference Dt, ec		- Sep1, s2 - Sep2 ct-Cocktailed Added	Page 3	ISV - Ins	sufficient Volum	e for Analysis		WO Cnt; 12 5_SamplePrep v4.8.20

3/31/2006 10:49:51 AM 536403, Brown and Caldwe Caldwell Report Due: 03/31/2006		TE Ba-13	Sample Prep 26/228 PrpRC5016, 33 by Nai & Ra-226 IDARD TEST SET	SepRC5005			Balance Id:1120373922,1120373922,1 Pipet #: Sep1 DT/Tm Tech:				
Batch: 6060342 FILT SEQ Batch, Test: 6060344, BX	ER pCi/sar	npl	PM, Q	uote: EJ , 631	74						
, Salai, 1631, 0000344, DX	1						Sep2 DT/Tm 1				
Work Order, Lot, Total Ar		Initial Aliquot	Adj Aliq Amt	QC Tracer				Fech: HansenM,Ha	ackS		
	THE STATE OF THE	Amt/Unit	(Un-Acidified)	Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
13HX816-1-AC 0.833sa J6B270158-13-SAMP	505.04sa	150.54g,in	0.2483g	RATA21358		C ()	1739	4/3/0600	<u>- L</u>		
			7:6277 =	03/31/06	********************	98	/ (7 '			
		B0	8.701 /				4.5.6	M 13:50	~		
			0.8766			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4-10-6	4			
02/05/2006 08:20	Amti	Rec: FOLDER	#Containers: 1			_			^		
4HX817-1-AC 0.833sa	501.67sa	150.12g,in	0.2493g	RATA21359		Scr:	Alpha:	TSB	Beta:		
J6B270158-14-SAMP 	l 1-		7.5875-	03/31/06		44	1821	4/3/04070			
	lí	***	7.283 /		*		11 ~	1 -			
			10418-			•		W 13:20			
02/05/2006 08:45	4						4-10-6	M 12:19			
5HX818-1-AC 0.833sa	501.09sa	Rec: FOLDER 150.95g,in	#Containers: 1			Scr:	Alpha:	_KMD	Beta:		
6B270158-15-SAMP		130.339,111	0.2509g 7.6076=	RATA21360 03/31/06		67	1821	4/3/0600			
								· · · /	~~=4		
~~===			7.959	**************************************			4-5-(e M 13:5	O.		
			0.9558		7884		4-10-	6 M 12:11	4		
02/05/2006 06:45	AmtR	tec: FOLDER	#Containers: 1			Scr:	Alpha:	1 1/102	V		
6H0EQ5-1-AA-B 6C010000-342-BLK		1.00sa,in	1.00sa	RATA21361		G8	1823	4/3/0600	Beta:		
			7-5875=	03/31/06		9 5	70-3	1770400			
			8.500				4-5	6M 13:	50		
	***************************************	B84-1484++++++++	0.8926				4-10)-6M 12:	<u> 1</u> 0		
2/05/2006 06:00	AmtRe	9C: #C	ontainers: 1					_) - 1		
						Sor:	Alpha:	PMA	Beta:		
STI Diphland											
STL Richland Key: In - Initia Richland Wa. pd - Pre	al Amt, fi - Final Amt, di Dt, r - Reference Dt, ec-l	- Diluted Amt, s1 -	Sep1, s2 - Sep2 P	age 4	ISV - Insu	fficient Volume f	or Analysis	W	O Cnt: 16		
1 110	, riciorence Dt, ec-t	Emicriment Cell, c	Cocktailed Added						SamplePrep v4.8.20		

3/31/2006 10:49:52 AM Report Due: 03/31/2006 Batch: 6060342 SEQ Batch, Test: None		TE Ba-13	Sample Prep 26/228 PrpRC5016, 3 by Nal & Ra-226 DARD TEST SET	SepRC5005	-			oet #:	22,1120373922,112
Batch: 6060342 SEQ Batch, Test: None	pCi/sa	ampi							
Total Baton, 163t, None						,	Sep2 DT/Tm T		
Work Order, Lot, Total Amt	Total	Initial Aliquot	U A of A if				Prep T	ech: ,HaackS	
Sample Date /Unit	Acidified/Unit	Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector (Count On Off (24hr) Circle	CR Analys	t, Comments:
17H0EQ5-1-AC-C		1.00sa,in	1.00sa	RASC4036				Init/Date	
J6C010000-342-LCS		***********	7.4306_	03/13/06,pd 10/04/04,r		96	1813	4/3/060X)
			7.457			h	5-6 N	1 14:30	\
			0.9965	***************************************			10-6 M	12:44	
02/05/2006 06:00	A	ımtRec: #	Containers: 1				_	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Comments:						Scr:	Alpha:	SW C	Beta:
•									
All Clients for Batch: 536403, Brown and Caldw	ell	Bro	wn & Caldwell		EJ , 63174			<u> </u>	
IX81N1AC-SAMP Constituent L	ist:				20 , 031/4				
Ba-133 RDL:	pCi/sam LCL	.:20 UCL:11	5 RPD:20	Ra-226	RDL:1.00E+00	pCi/sam	T.01		
OEQ51AA-BLK:						, PCI/Bam	LCL:	UCL:	RPD:
Ba-133 RDL:	pCi/sam LCL	.:20 UCL:11	5 RPD:20	Ra-226	RDL:1.00E+00	pCi/sam	LCL:	UCL:	RPD:
OEQ51AC-LCS: Ba-133 RDL:						•			KED:
Ba-133 RDL:	pCi/sam LCL	:20 UCL:11	5 RPD:20	Ra-226	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20
									
X81N1AC-SAMP Calc Info: Uncert Level (#s).: 2 0EQ51AA-BLK:	Decay to SaD	t: Y Blk Sul	ot.: N Sci.No	ot.: Y OD	Rs: B				

STL Richland Richland Wa.

HOEQ51AC-LCS:

Uncert Level (#s).: 2

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Decay to SaDt: Y

Blk Subt.: N

Blk Subt.: N

Sci.Not.: Y

Sci.Not.: Y

ODRs: B

ODRs: B

Approved By _

ISV - Insufficient Volume for Analysis

WO Cnt: 17 Prep. SamplePrep v4.8.20 4/11/2006 4:36:42 PM

ICOC Fraction Transfer/Status Report ByDate: 4/11/2005, 4/16/2006, Batch: '6060342', User: 'ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us Ac	cepting		Comments
5060342 AC 50 50 50 50 50 50 50 50 50	Cnt2C	HansenM wagarr HansenM HaackS HaackS WhitneyT DAWKINSO DAWKINSO TamosaitisM TamosaitisM HaackS	3/29/2006 2:05 IsBatched Prep2C InPrep Sep1C Sep1C InCnt1 Cnt1C InSep2 Cnt2C 3/31/2006 8:19	3/1/2006 4:16:24 PM 3/29/2006 2:05:30 PM 3/31/2006 8:19:03 AM 4/3/2006 1:30:53 PM 4/3/2006 1:32:45 PM 4/3/2006 1:49:56 PM 4/3/2006 7:41:18 PM 4/5/2006 1:28:38 PM 4/10/2006 11:39:44 AM	ICOC_RADCALC v4.8.18 RICH-RC-5016 REVISION 5 RICH-RC-5005 REVISION 4 RICH-RC-5005 REVISION 4 RICH-RC-5005 REVISION 4 RICH-RD-0007 REVISION 5 RICH-RD-0007 REVISION 5 RICH-RC-5005 REVISION 5
46 46 46 46 46 46		HaackS WhitneyT DAWKINSO DAWKINSO TamosaitisM	4/3/2006 1:30:5 4/3/2006 1:32:4 4/3/2006 1:49:5 4/3/2006 7:41: 4/5/2006 1:28:5 4/10/2006 11:3	53 PM 45 PM 56 PM 18 PM 38 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richiand Wa. STERICHEAND

4/11/2006 4:	36:42 PM		Rpt DB Transfe	r log (ults)		VERN RENT	STL
SDG or Batch	Rpt Db Io		LotSample Client Id Qc Analysis Date Result	Matri. Cnt Uncert	x Recei	ved Date	Sample Date Units ⊏x	e pected Yield	d Ve	olumes
<u>Isotope</u> 31025	9HX811		J6B2701588 P 0517	AIR		2006 8:00:00				
ALPHA	BAS7	0	4/6/2006 8:46:58 PM 9.9486E-03	1.059E+00	1.059E+00	5.274E+00	PCI/SA	1.0	1.0E+0	2.082E-2
BETA	BD\$8	0	4/5/2006 10:15:47 AM 1.5137E+00	1.293E+00	1.298E+00	5.298E+00	PCI/SA	1.0	1.0E+0	3.405E-2
RA-226	BXTE	0	4/10/2006 2:46:00 PM 2.2347E-01	9.499E-02	9.757E-02	2.773E-01	PCI/SA	1.058	8.33E-1	2.493E-1
31025	9HX812	10	J6B2701589 000357	AIR	2/27/2	2006 8:00:00	2/5/2006 6:0	5:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1.0284E+01	2,198E+00	2.444E+00	5.179E+00	PCI/SA	1.0	1.0E+0	2.07E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM 1.7618E+01	1.728E+00	2.098E+00	5.209E+00	PCI/SA	1.0	1.0E+0	3.295E-2
RA-226	BXTË	0	4/10/2006 3:21:00 PM -2.3959E-01	1.359E-01	1.382E-01	6.036E-01	PCI/SA	0.937	8.33E-1	2.48E-1
31025	9HX813	10	J6B27015810 000358	AIR	2/27/2	2006 8:00:00	2/5/2006 6:4	0:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 4.1731E+00	1.552E+00	1.612E+00	4.862E+00	PCI/SA	1.0	1.0E+0	2.08E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.6272E+01	1.704E+00	2.031E+00	5.341E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.6862E-01	1.056E-01	1.092E-01	3.078E-01	PCI/SA	0.985	8.33E-1	2.505E-1
31025	9HX814	10	J6B27015811 000359	AIR	2/27/2	2006 8:00:00	2/5/2006 7:2	0:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 6.8426E+00	1.932E+00	2.058E+00	5.45E+00	PCI/SA	1.0	1.0E+0	2.079E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.8892E+01	1.608E+00	2.503E+00	4.713E+00	PCI/SA	1.0	1.0E+0	3.318E-2
RA-226	BXTE	0	4/10/2006 3:20:00 PM 3.0838E-01	1.419E-01	1.458E-01	4.564E-01	PCI/SA	1.111	8.33E-1	2.498E-1
31025	9HX8151	10	J6B27015812 000360	AIR	2/27/2	00:00:8 00:00	2/5/2006 7:5	0:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1.6852E+01	2.628E+00	3.144E+00	5.103E+00	PCI/SA	1.0	1.0E+0	2.093E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 2.5147E+01	1.852E+00	2.52E+00	5.06E+00	PCI/SA	1.0	1.0E+0	3.357E-2
RA-226	BXTE	0	4/10/2006 3:21:00 PM 5.6304E-01	1.765E-01	1.864E-01	5.117E-01	PCI/SA	1.039	8.33E-1	2.515 E -1
31025	9HX8161	10	J6B27015813 000361	AIR	2/27/2	2006 8:00:00	2/5/2006 8:2	0:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 9.3614E+00	2.111E+00	2.319E+00	4.967E+00	PCI/SA	1.0	1.0E+0	2.09E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 2.4664E+01	1.871E+00	2.53E+00	5.184E+00	PCI/SA	1.0	1.0E+0	3.3E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.0856E+00	2.48E-01	3.317E-01	4.022E-01	PCI/SA	1.141	8.33E-1	2.483E-1
31025	9HX817	10	J6B27015814 000362	AIR	2/27/2	00:00:8	2/5/2006 8:4	5:00 AM		
ALPHA	BA\$7	0	4/7/2006 11:31:06 AM 1.0892E+01	2.232E+00	2.504E+00	5.119E+00	PCI/SA	1.0	1.0E+0	2.095E-2
BETA	BDS8	Ö	4/5/2006 11:54:24 AM 2,4118E+01	1.885E+00	2.509E+00	5.291E+00	PCI/SA	1.0	1.0E+0	3.384E-2
RA-226	BXTE	0	4/10/2006 3:19:03 PM 1.1391E-01	1.07E-01	1.077E-01	3.869E-01	PCI/SA	0.96	8.33E-1	2.493E-1
31025	9HX8181	10	J6B27015815 000363	AIR	2/27/2	006 8:00:00	2/5/2006 6:4	5:00 AM		
ALPHA	BAS7	0	4/7/2006 11:31:06 AM - 8.6245E-01	7.724E-01	7.776E-01	4.857E+00	PCI/SA	1.0	1.0E+0	2.085E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM -1.2859E+00	1.219E+00	1.222E+00	5.36E+00	PCI/SA	1.0	1.0E+0	3.447E-2
RA-226	BXTE	0	4/10/2006 3:14:00 PM 1.1151E-01	8.896E-02	8.966E-02	3.131E-01	PCI/SA	1.046	8.33E-1	2.509E-1
31025	9HX81N	10	J6B2701581 P 0510	AIR	2/27/2	006 8:00:00	2/5/2006 6:0	0:00 AM		
ALPHA	BAS7	0	4/6/2006 6:03:23 PM 2.1099E+00	1.514E+00	1.53E+00	5.957E+00	PCI/SA	1.0	1.0E+0	2.091E-2
BETA	BD\$8	0	4/5/2006 9:14:39 AM 1.3188E+01	1.644E+00	1.89E+00	5.408E+00	PCI/SA	1.0	1.0E+0	3.278E-2
RA-226	BXTE	0	4/10/2006 2:53:00 PM 2.6364E-01			5.224E-01	PCI/SA	0.993	8.33E-1	2.511E-1
31025	9HX81Q		J6B2701582 P 0511	AIR			2/5/2006 6:3	5:00 AM		
ALPHA	BAS7	0		1,605E+00	1.632E+00	5.973E+00	PCI/SA	1.0	1.0E+0	2.082E-2
BETA	BDS8	0	4/5/2006 9:14:39 AM 1.1516E+01	1.524E+00	1.81E+00	5.034E+00	PCI/SA	1.0	1.0E+0	3.315E-2
RA-226	BXTE	0	4/10/2006 2:51:00 PM -2.2718E-01					0.912	8.33E-1	2.502E-1
31025	9HX81R		J6B2701583 P 0512	AIR		2006 8:00:00		5:00 AM		
ALPHA	BAS7	0	0002.0.00	1.709E+00	1.78E+00	5.252E+00	PCI/SA	1.0	1.0E+0	2.087E-2
BETA	BDS8	0	4/5/2006 9:14:39 AM 1.3284E+01	1.666E+00	1.895E+00	5.53E+00	PCI/SA	1.0	1.0E+0	3.319E-2
RA-226	BXTE	0	4/10/2006 2:51:00 PM 1.0827E-01			2.838E-01		1.151	8.33E-1	2.508E-1
31025	9HX81T		J6B2701584 P 0513	AIR	2/27/2	2006 8:00:00	2/5/2006 7:4	5:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM 9.6327E+00			5.858E+00		1.0	1.0E+0	2.052E-2
BETA	BDS8	0	4/5/2006 9:14:52 AM 1.9108E+01			5.406E+00		1.0	1.0E+0	3,204E-2
RA-226	BXTE	0	4/10/2006 2:50:01 PM 2.633E-01			8.009E-01		0.98	8.33E-1	2.462E-1
31025	9HX81V		J6B2701585 P 0514	AIR		2006 8:00:00				
	BAS7	0	4/6/2006 8:46:58 PM 9.0898E+00			4.93E+00		1.0	1.0E+0	2.086E-2
ALPHA RETA	BDS8	0	4/5/2006 9:14:52 AM 1.6437E+01					1.0	1.(IE+0	3.311E-2
BETA			4/10/2006 2:50:03 PM 1.4068E-01					1.081	8.33E-1	2.515E-1
RA-226	BXTE	0	4/10/2006 2:50:03 PM 1.4068E-01	1.3546-01	1.5032-0	→.000E-U1	- OF OA	1.001	0.000-1	2.0 (OL*

STL Richland, Wa Calc Review v4.8.18

^{6060342, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 17 | 0 | 0 | 0.

**Diff RptDb | Otims => .

SDG or Batch	Apt Db Id	LotSample Client Id	Matrix F	Received Date	Sample Date	
Isotope	Method RTst C	Oc Analysis Date Result	Cnt Uncert Tot u	псел маа	Units Expected Yiel	d. Volumes
31025	9HX81W10	J6B2701586 P 0515		/27/2006 8:00:00	2/5/2006 8:40:00 AM	a. Joinings
ALPHA	BAS7 0	4/6/2006 8:46:58 PM 6.5328E+00	1.979E+00 2.091E	E+00 5.942E+00	PCI/SA 1.0	1.0E+0 2.095E-2
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.3832E+01	1.591E+00 2.017E	E+00 5.064E+00	PCI/SA 1.0	1.0E+0 3.342E-2
RA-226	BXTE 0	4/10/2006 2:51:01 PM 2.3557E+00	2.987E-01 3.921E	E-01 7.098E-01	PCI/SA 0.934	8.33E-1 2.51E-1
31025	9HX81X10	J6B2701587 P 0516	AIR 2	/27/2006 8:00:00	2/5/2006 6:10:00 AM	
ALPHA	BAS7 0	4/6/2006 8:46:58 PM 2.9152E+00	1.602E+00 1.63E+	+00 5.964E+00	PCI/SA 1.0	1.0E+0 2.083E-2
BETA	BDS8 0	4/5/2006 9:14:52 AM 1.3292E+01	1.748E+00 1.989E	+00 5.916E+00	PCI/SA 1.0	1 0E+0 3.372E-2
RA-226	BXTE 0	4/10/2006 2:50:00 PM -1.184E-01	1.327E-01 1.332E	-01 5.743E-01	PCI/SA 1.019	8.33E-1 2.505E-1
31025	H0EQ51AB	J6C010000342 INTRA-LAB BL	ANK AIR 2/	27/2006 8:00:00	2/5/2006 6:00:00 AM	
RA-226	BXTE 0 B	4/10/2006 3:19:01 PM -4.4559E-02	2.882E-02 2.917E	-02 1.319E-01	PCI/SA 1.12	1.0E+0 1.0E+0
31025	H0EQ51CS	J6C010000342 INTRA-LAB CH	ECK AIR 2/	27/2006 8:00:00	2/5/2006 6:00:00 AM	
RA-226	BXTE 0 S	4/10/2006 3:44:00 PM 1.4021E+00	1.0E-01 1.829E	-01 1.384E-01	PCI/SA 1.3562E+00 1.004	1.0E+0 1.0E+0

STL Richland, Wa Calc Review v4.8.18

Page 2

^{6060342, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestinserted | Updated | NotInserted => 17 | 0 | 0 | 0.

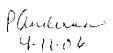
**Diff RptDb | Qtims => .

Batch Nbr: 6060342

Alpha Beta, Ra-226 by ASC-7, Results Summary Report

4/11/2006 4:21:05 PM

Status	Meth	Matrix	Wrk Ord	Paramete	r Sa Act	Uncert	Q Units	Av ILcC	IDC	QC Yield	RYId
Ra-22	6 by A	SC-7	Rick	hland Stan	dard Ra-226	5/Ra-228 De	em Wo Blk		C PID	- 1	
Calc	ΤE	AIR	HX81N1AC	RA-226	2.64E-01	(1.57E-01)	PCI/SA	R 2.33E-01	5.22E-01,7	99%	
Calc	TE	AIR	HX81Q1AC	RA-226	-2.27E-01	(1.39E-01)	U4 PCI/SA	R 2.72E-01	6.17E-01	91%	
Calc	ΤE	AIR	HX81R1AC	RA-226	1.08E-01	(8.23E-02)	U4 PCI/SA	R 1.13E-01	2.84E-01	115%	
Calc	TE	AIR	HX81T1AC	RA-226	2.63E-01	(2.31E-01)	U4 PCI/SA	R 3.69E-01	8.01E-01	98%	
Calc	TÉ	AIR	HX81V1AC	RA-226	1.41E-01	(1.36E-01)	U4 PCI/SA	R 2.05E-01	4.89E-01	108%	
Calc	TE	AIR	HX81W1AC	RA-226	2.36E+00	(3.92E-01)	PCI/SA	R 3.24E-01	7.10E-01	93%	
Calc	TE	AIR	HX81X1AC	RA-226	-1.18E-01	(1.33E-01)	U4 PCI/SA	R 2.49E-01	5.74E-01	102%	
Calc	TE	AIR	HX8111AC	RA-226	2.23E-01	(9.76E-02)	PCI/SA	R 1.08E-01	2.77E-01	106%	
Calc	TE	AIR	HX8121AC	RA-226	-2.40E-01	(1.38E-01)	U4 PCI/SA	R 2.68E-01	6.04E-01	94%	
Calc	TE	AIR	HX8131AC	RA-226	2.69E-01	(1.09E-01)	PCI/SA	R 1.24E-01	3.08E-01	9 9%	
Calc	ΤE	AIR	HX8141AC	RA-226	3.08E-01	(1.46E-01)	PCI/SA	R 1.98E-01	4.56E-01	111%	
Calc	TE	AIR	HX8151AC	RA-226	5.63E-01	(1.86E-01)	PCI/SA	R 2.21E-01	5.12E-01	104%	
Calc	TE	AIR	HX8161AC	RA-226	2.09E+00	(3.32E-01)	PCI/SA	R 1.67E-01	4.02E-01	114%	
Calc	TE	AIR	HX8171AC	RA-226	1.14E-01	(1.08E-01)	U4 PCI/SA	R 1.58E-01	3.87E-01	96%	
Calc	TE	AIR	HX8181AC	RA-226	1.12E-01	(8.97E-02)	U4 PCI/SA	R 1.29E-01	3.13E-01	105%	
Calc	TE	AIR	H0EQ51AA	RA-226	-4.46E-02	/ (2.92E-02)	U4 PCI/SA	R 5.74E-02	1.32E-01	B 112%	
Calc	TE	AIR	H0EQ51AC	RA-226	1.40E+00	(1.83E-01)	PCI/SA	R 6.08E-02	1.38E-01	S 100%	103%



() - (1s Uncertainities) IDC - Instrument Detection Level in Conc Units MLcC- Method Decision Level in Conc Units

MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 1

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:17 RADCALC v4.8.21 STL Richland

Batch Nbr: 6060342

Alpha Beta, Ra-226 by ASC-7, Calculated Results Detailed Report

4/11/2006 4:21:05 PM

	Bolanoa	Пороге	
Sq Status Method Matrix Protocol Equati	tion Set Wrk Ord Units/Matrix QC/BB Sa/On Date	AnalysisDate/PptWt Sep1/Sep2 Date Q0	C/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count Vol
and the second s	SWoBS HX81N1AC PCI/SA 02/05/06 06:00	· · · · · · · · · · · · · · · · · · ·	RATA21346 1 0.833 Sa
CID:P 0510LOT:J6B2701581 v4.8.21	AIR	04/10/06 11:53	RATA21346 Alq 99% / 0.251127 Sa
Sq Cnt Date Parameter Sample Cnt	Bkgrad Cnt Instr Geom Trc/Av Ent Efficiency1	Efficiency 2 Ent Yid Fct Ent Blk V	/alue ingr Fct Conv Fct/VolAdj Decay Abn
1 04/10/06 14:53 RA-226 35 ·	27 ASC1RH ASC N 2.4727E+00	1.0000E+00 N 99% ✓ N	1.7337E+00 4.5045E-01 1.0001E+00
50	60 V (3.338E-02)	(0.000E+00) 8%	(0.000E+00) 3.317041
Sq Calc Date Parameter Avg Sa A	Act Q Net Cnt Rt Dpm Wo Blk Dpm-Bl	1k Vol Used Yield,EnFct Ch	em Yld,EFctU IDC/ILcC BlkLcC/MDC StdDvMdC/LcC
04/11/06 RA-226 R 0.2636 4 (0.1568	(4 (444 = 1)) (5 40 40 6)	0,000 00	0.522372 0.232745
Sq Status Method Matrix Protocol Equation	tion Set Wrk Ord Units/Matrix QC/BB Sa/On Date	AnalysisDate/PptWt Sep1/Sep2 Date Qu	C/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count Vol
2 Calc TE AIR *STLE Ra226	6WoBS HX81Q1AC PCI/SA 02/05/06 06:35	04/10/06 14:51 04/05/06 13:30	BATA21347 1 0.833 Sa
CID:P 0511LOT:J6B2701582 v4.8.21	A/A		BATA21347 Alq 91% 0.250217 Sa
Sq Cnt Date Parameter Sample Cnt	Bkgrnd Cnt Instr Geom Trc/Av Ent Efficiency1	Efficiency 2 Ent Yld Fct Ent Blk 1	/alue ingr Fct Conv Fct/VolAdj Decay Abn
1 04/10/06 14:51 RA-226 10 /	22 ASC2RC ASC N 2.0913E+00	1.0000E+00 N 91% / N	1.7340E+00 4.5045E-01 1.0001E+00
50	60 (2) Y (6.818E-02)	(0.000E+00) 7%	(0.000E+00) 3.329109
Sq Calc Date Parameter Avg Sa A	Act Q Net Cnt Rt Dpm Wo Blk Dpm-Bl	Ik Vol Used Yield,EnFct Ch	em Yld,EFctU IDC/ILcC BIkLcC/MDC StdDvMdC/LcC
04/11/06 RA-226 R -0.2271	(4 m - (1 0000000)	^,	0.616665
(0.1390	088) (1.0055E-01) (0.092326) (0.092326	5) (0.024495)	0.271554
Sq Status Method Matrix Protocol Equati	tion Set Wrk Ord Units/Matrix QC/BB Sa/On Date	AnalysisDate/PptWt Sep1/Sep2 Date Q	C/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count Vol
3 Calc TE AIR *STLE Ra226	6WoBS HX81R1AC PCI/SA 02/05/06 07:15	04/10/06 14:51 04/05/06 13:30	RATA21348 1 0.833 Sa
CID:P 0512LOT:J6B2701583 v4.8.21	AIR	04/10/06 11:51	RATA21348 Alq 115% 0.250795 Sa
Sq Cnt Date Parameter Sample Cnt	Bkgrnd Cnt Instr Geom Trc/Av Ent Efficiency1	Efficiency 2 Ent Yld Fct Ent Blk	/alue Ingr Fct Conv Fct/VolAdj Decay Abn
1 04/10/06 14:51 RA-226 10 -	6 ASC3MA ASC N 2.3964E+00	1.0000E+00 N 115% ✓ N	1.7340E+00 4.5045E-01 1.0001E+00
50	60 (3), Y (9.873E-02)	(0.000E+00) 9%	(0.000E+00) 3.321443
Sq Calc Date Parameter Avg Sa A		lk Val Used Yield,EnFct Ch	em Yld,EFctU IDC/iLcC BlkLcC/MDC StdDvMdC/LcC
04/11/06 RA-226 R 0.10826		0.833 Sa 115%	0.283829
(0.0823	321) (7.5277E-02) (0.054858) (0.054858	(0.024495)	0.112641
Sq Status Method Matrix Protocol Equati	tion Set Wrk Ord Units/Matrix QC/BB Sa/On Date	AnalysisDate/PptWt Sep1/Sep2 Date Q	C/Tracer Vial Mult/EntYld Total/Analy Vol Final/Count Vol
4 Calc TE AIR *STLE Ra226	6WoBS HX81T1AC PCI/SA 02/05/06 07:45	04/10/06 14:50 04/05/06 13:30	RATA21349 1 0.833 Sa
CID:P 0513LOT:J6B2701584 v4.8.21	AIR	04/10/06 11:50	RATA21349 Alq 98% 0.246247 Sa
Sq Cnt Date Parameter Sample Cnt	Bkgrnd Cnt Instr Geom Trc/Av Ent Efficiency1	Efficiency 2 Ent Yld Fct Ent 8lk	/alue Ingr Fct Conv Fct/VolAdj Decay Abn
1 04/10/06 14:50 RA-226 58	56 ASC4HB ASC N 2.3219E+00	1.0000E+00 N 98% N	1.7341E+00 4.5045E-01 1.0001E+00
50	60 (4) Y (1.182E-01)	(0.000E+00) 8%	(0.000E+00) 3.382789
() - (1s Uncertainities), Q - Qualifier, U Result is Les	ss Than Lc = 1.645 * TPU Page	1	RecCnt:4 RADCALC v4.8.21
IDC - Instrument Detection Level in Conc Units, MLcC	C - Method Decision Level in Conc Units, MDC- Minimum Detectable	le Concentration	STL Richland
- 31-99 Coulds are Derived from the Compination of Eac	ich Sr-89/90 and Y-90 Count, All Result Digits May Not be Significan	nts. Date/Time - mm/gd/yy hh:mm, 24hr Time	5 · · · · · · · · · · · · · · · · ·

3	Batch Nbr:	6060342			Δ.	Inha Ra	ıta İ	3a - 22	6 by 45	C-7 (`alcul	ated Resi	ulte	enema internación de la compensación de las compensaciones de la compensación de la compe	4/11/	2006 4:21:05 PM
1	Sq Calc Date		Avg	Sa Act	Q ''	Net Cnt F		pm Wo Bii	•	,	Jaiouii I Used			EFctU (DC/ILcC		:008 4.21.03 FW
	04/11/06	RA-226		0.263297 (0.230543)	U4	2.26667E-0	1 0.	17278 .150954)	0.17278 (0.15095		0.833 (.024495)			0.800938 0.369209		
,	Sq Status Metho	d Matrix I	Protoco	Equation Set	Wrl	k Ord Ur	its/Matr	ix QC/BB	Sa/On Date	AnalysisD	ate/PptWt	Sep1/Sep2 Date	QC/Tracer	Vial Mult/EntY	Id Total/Analy Vo	of Final/Count Vol
	5 Catc TE CID:P 0514LOT:J6I		*STLE	Ra226WoBS	HX81	V1AC PO	i/SA	02/	05/06 08:15	04/10/06	14:50	04/05/06 13:30 04/10/06 11:50		•	0.833 Sa 6 0.251 4 92 Sa	P. C. S. P. C. And School & contributes a constraint of the contribute of the contri
OL TOPPED AND	Sq Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	Cnt	Instr Ge	om Tr	c/Av Ent	Efficiency1	Efficiency 2	Ent	Yld Fct Ent	Ślk Value	Ingr Fct	Conv Fct/VolAdj [Decay Abn
1	1 04/10/06 14	50 RA-226	14 50	11 60	A	SC5SA AS			1.7780E+00 8.943E-02)			108% N 9%		1.7342E+00 (0.000E+00)	4.5045E-01 1. 3.312227	0001E+00
- Augustan - 4	Sq Calc Dat	Parameter	Avg	Sa Act	Q	Net Cnt F	11 E	pm Wo Bii	k Dpm-E	Blk Vol	Used	Yield,Enl	ct Chem Yld,	EFctU IDC/ILcC	BikLcC/MD	C StdDvMdC/LcC
1	04/11/06	RA-226		0.140679 (0.13629)	U4	9.66667E-0		094283 .091177)	0.094283 (0.09117	٠,	0.833 (.024495)	Sa 108%		0.488648 0.205007		
200	Sq Status Metho	d Matrix	Protoco	I Equation Set	Wr	k Ord Ur	its/Matr	ix QC/BB	Sa/On Date	AnalysisD	ate/PptWt	Sep1/Sep2 Date	QC/Tracer	Vial Mult/EntY	Id Total/Analy Vo	ol Final/Count Vol
	6 Calc TE CID:P 0515LOT:J6		*STLE	Ra226WoBS	HX81	W1AC PO	I/SA	02/	05/06 08:40	04/10/06	14:51	04/05/06 13:3 04/10/06 11:5		351 1 351 Alq 93%	0.833 Sa , 0.251007 Sa	erromentigene errort (i.e. Ballike a. S. svenge _{rr} a
	Sq Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	Cnt	Instr Ge	om Tr	c/Av Ent	Efficiency1	Efficiency 2	Ent	Yld Fct Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj [Decay Abn
	1 04/10/06 14	51 RA-226	141 50	45 60	A	SC8HB AS	-			1.0000E+00 (0.000E+00)		93% N 7%		1.7340E+00 (0.000E+00)	4.5045E-01 1. 3.318637	0001E+00
1	Sq Calc Dat	Parameter	Avg	Sa Act	Q	Net Cnt f	it C	Dpm Wo Bli	k Dpm-E	lik Vo	Used	Yield,Enl	ct Chem Yld,	EFctU IDC/ILc0	BIKLcC/MD	C StdDvMdC/LcC
	04/11/06	RA-226		2.35573 (0.392147)		2.07000E+ (2.6249E-0		575755 (.245868)	1.575758 (0.24586	•	0.833 (.024495)	Sa 93%		0.709799 0.324251	,	
	Sq Status Metho	d Matrix I	Protoco	l Equation Set	Wr	k Ord Ur	its/Matr	ix QC/BB	Sa/On Date	AnalysisD	ate/PptWt	Sep1/Sep2 Date	QC/Tracer	Vial Mult/EntY	Id Total/Analy Vo	of Final/Count Vol
	7 Calc TE CID:P 0516LOT:J6		*STLE	Ra226WoBS	HX81	X1AC PO	I/SA	02/	05/06 06:10	04/10/06	14:50	04/05/06 13:3 04/10/06 11:5		-	0.833 Sa % 0.250452 Sa	er maan meet terman in die Andreaster van de Stadenders.
	Sq Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	l Cnt	Instr Ge	om Tr	c/Av Ent	Efficiency1	Efficiency 2	Ent	Yld Fct Ent	·Blk Value	Ingr Fct	Conv Fct/VolAdj I	Decay Abn
	1 04/10/06 14	50 RA-226	10 50	17 60	A	ASCORC AS	C \			1.0000E+00 (0.000E+00)		102% N 8%		1.7341E+00 (0.000E+00)	4.5045E-01 1. 3.325986	0001E+00
	Sq Calc Dat	e Parameter	Avg	Sa Act	Q	Net Cnt F	it C	pm Wo Bi	k Dpm-E	lk Vol	l Used	Yleid,Eni	ct Chem Yld,	EFctU IDC/ILcC	BikLcC/MD	C StdDvMdC/LcC
	04/11/06	RA-226	Ŕ	-0.118398 (0.133247)	U4	-8.33333E-0		.079022 .088814)	-0.07902 (0.08881	43	0.833 0.024495)	Sa 102%	-	0.574335 0.248812		
	Sq Status Metho	d Matrix	Protoco	Equation Set	Wr	k Ord Ur	its/Matr	ix QC/BB	Sa/On Date	AnalysisD	ate/PptWt	Sep1/Sep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy Vo	ol Final/Count Vol
	8 Calc TE CID:P 0517LOT:J6		*STLE	Ra226WoBS	HX81	11AC PO	CI/SA	02/	05/06 06:15	04/10/06	14:46	04/05/06 13:3 04/10/06 11:4		353 1 353 Alq 106%	0.833 Sa 6 0.249314 Sa	e familian e en en en en en en en en en en en en
	Sq Cnt Date			ple Cnt Bkgrno					Efficiency1	Efficiency 2		Yld Fct Ent	Blk Value	Ingr Fet	Conv Fet/VolAdj	Decay Abn
	() - (1s Uncertai IDC - Instrument E Sr-89 Counts are	nities), Q - Qualifie etection Level in C	er, U Res Conc Uni	sult is Less Than ts, MLcC - Metho	Lc = 1 64 od Decisi	45 * TPU ion Level in Co	nc Units	, MDC- Mir	Page imum Detectab	2 le Concentratio		er i i i i i i i i i i i i i i i i i i i	na na an man an an an an an an an an an an an an a	RecC		DCALC v4.8.21 Richland

В	atch Nbr: 6	060342			Alp	oha Beta	, Ra-22	e by AS	SC-7 , C	Calcul	ated	Resul	ts		4/1	/2006 4:21	:06 P
0	4/10/06 14:46	RA-226	14 50	5 60	AS	CBMA ASC		2.2978E+00 (2.895E-02)		N	106% 8%	N		1.7347E+00 (0.000E+00)	4.5045E-01 3.341168	1.0001E+00)
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo B	,	,	Used		Yield,EnFct	Chem Yio	JEFetU IDC/ILc0		DC StdDvM	ldC/Lc
	04/11/06	RA-226	R	0.223471 (0.097567)		1.96667E-01 (8.3600E-02)	0.148473 (0.064248)	0.148473 (0.06424		0.833	Sa	106%		0.277296			
S p	tatus Method	Matrix	Protoco	l Equation Set	Wrk	Ord Units/N	Matrix QC/BE	3 Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	r Vial Mult/Enty	id Total/Analy	Vol Final/Co	ount V
		AIR 701589 v4.8.21	*STLE	Ra226WoBS	HX812	1AC PCI/S	A 02	/05/06 06:05	04/10/06	15:21		/06 13:50 /06 12:21	RATA2		0.833 S 0.248015 S		nemaka da da gerra da 17
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	l Cnt Ir	nstr Geom	Trc/Av Ent	Efficiency1	Efficiency 2	Ent	Yld Fct		31k Value	,	Conv Fct/VolAd		Ab
C	04/10/06 15:2	1 RA-226	12 50	26 60	_	CCSA ASC		2.2567E+00 (7.628E-02)	1.0000E+00 (0.000E+00)		94% 7%	N			4.5045E-01		
Sq	Calc Date	Parameter	Avg	Sa Act	٥	Net Cnt Rt	Dpm Wo B	ilk Dpm-l	3ik Vol	Used		Yield,EnFcI	Chem Yle	I,EFetU IDC/ILe(IDC StdDvM	ldC/Lc
	04/11/06	RA-226	Ħ	-0.239593 (0.138166)		-1,93333E-01 (1.0965E-01)	-0.158355 (0.090855)	-0.15835 (0.09085	-	0.833 (.024495)		94%		0.6036 4 0.268395	j		*
q S	tatus Method	Matrix	Protoco	Equation Set	Wrk	Ord Units/N	Aatrix QC/BI	3 Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent\	/Id Total/Analy	Vol Final/C	ount V
	alc TE 00358LOT:J6B2	AIR 27015810 v4.8.2		Ra226WoBS	HX813	1AC PCI/S	A 02	2/05/06 06:40	04/10/06	15:19		/06 13:50 /06 12:19	RATA2	1355 1 1355 Alq 99%	0.833 S		rannandra ar en caracter
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	f Cnt Ir	nstr Geom	Trc/Av Enl	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Ab
C	04/10/06 15:1	9 RA-226	18 50	7 60	AS	SCDUD ASC	N Y	2.3862E+00 (7.302E-02)			99% 8%	N	···	1.7328E+00 (0.000E+00)	4.5045E-01 3.325367	1.0001E+00)
Sq	Calc Date	Parameter			Q	Net Cnt Rt	Dpm Wo B	ilk Dpm-l	3lk Vo	l Used		Yield,EnFct	Chem Yi	JEFetU IDC/ILed		IDC StdDvN	/dC/Lc
	04/11/06	RA-226	R	0.268621 (0.109161)		2.43333E-01 (9.5627E-02)	0.179318 (0.072124)	0.17931 (0.07212		0.833 (0.02 4 495)		99%		0.307792 0.124053			
q S	itatus Method	Matrix	Protoco	l Equation Set	Wrk	Ord Units/	Matrix QC/B	B Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent	/ld Total/Analy	Vol Final/C	ount V
		AIR 27015811 v4.8 2		Ra226WoBS	HX814	1AC PCI/S.	A 02	2/05/06 07:20	04/10/06	5 15:20		/06 13:50 /06 12:20	RATA2	-	0.833 S % 0.249764 S		VA. 1882 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1442 - 1
Sq	Cnt Date	Parameter	r Sam	ple Cnt Bkgmo	i Cnt i	nstr Geom	Trc/Av En	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	Decay	Ab
C	04/10/06 15:2	0 RA-226	29 50	18 60	AS	SCEHA ASC	N	2.3636E+00 (1.057E-01)			111% 9%	N		1.7326E+00 (0.000E+00)	4.5045E-01 3.335148	1.0001E+00)
Sq	Calc Date	Parameter	Avg		o,	Net Cn1 Rt	Dpm Wo E	ilk Dpm-l	Bik Vo	l Used		Yield,EnFct	Chem Yi	i,EFctU IDC/ILct		IDC StdDvN	/dC/Lc
	04/11/06	RA-226	R	0.308375 (0.145786)		2.80000E-01 (1.2884E-01)	0.205252 (0.096301)	0.20525 (0.09630	_	0.833 0.024495)		111%		0.456382 0.198462			
				sult is Less Than		5 * TPU in Level in Conc U	Inite MDC-M	Page			* - Mar No. * * y	· · · · · · · · · · · · · · · · · · ·		Rec		RADCALC v4	

	Status Method	Matrix	Protoco	l Equation Se	et Wi	rk Ord	Units/Ma	itrix QC	BB Sa/On Date	AnalysisDate/PptWt	Sep1/Se	p2 Date	QC/Tracer	Vial Mult/EntYl	d Total/Analy	Vol Final/Coun	it Vol
	Calc TE 000360LOT:J6B	AIR 27015812 v4.8		Ra226WoB	S HX81	151AC	PCI/SA AIR		02/05/06 07:50	04/10/06 15:21		6 13:50 6 12:21	RATA21 RATA21	-	0.833 S 0.251513 S		
So	Cnt Date	Paramet	er Sam	ple Cnt Bkgi	nd Cnt	Instr	Geom 3	Trc/Av E	int Efficiency1	Efficiency 2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Cop√ Fct/VolAdj	Decay	Abn
* *	04/10/06 15:2	21 RA-226	35 50	16 60		ASCGSB	ASC		1.9894E+00 (7.938E-02)	1.0000E+00 N (0.000E+00)	104% 8%	N	e e a como e consecuencio	1.7325E+00 (0.000E+00)	4.5045E-01 3.311959	1.0001E+00	r yr a Mangha a da a' a
S	q Calc Date	Paramete		Sa Act	Q	Net (Ont Rt	Dpm Wo	Blk Dpm-	Blk Vol Used	Y	ield,EnFc	t Chem Yid,	EFctU IDC/ILcC	BlkLcC/M	IDC StdDvMdC	/LcC
_	04/11/06	RA-226	R	0.563036 (0.186382)		4.3333 (1.358		0.37737 (0.12299				104%		0.511654 0.220747			
୍ . ସ	Status Method	i Matrix	Protoco	l Equation S	≘1 W	rk Ord	Units/Ma	atrix QC	/BB Sa/On Date	AnalysisDate/PptW	t Sep1/S	p2 Date	QC/Trace	r Vial Mult/EntY	ld Total/Analy	Vol Final/Cour	nt Vol
	Calc TE 000361LOT.J6E	AIR 327015813 v4.8		Ra226WoE	S HX8	161AC	PCI/SA AIR		02/05/06 08:20	04/10/06 15:19		06 13:50 06 12:19	RATA21	358 1 358 Alq 114%	0.833 S 4 _ 0.248297 S		
Sı	Cnt Date	Parame	ter Sam	ple Cnt Bkg	rnd Cnt	Instr	Geom	Trc/Av E	Ent Efficiency1	Efficiency 2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Çonv Fct/VolAd	Decay	Abn
	04/10/06 15:	19 RA-226	92 50	10 60		ASC ISB	ASC	Y	N 2.1011E+00 (7.837E-02)	1.0000E+00 N (0.000E+00)	114% 9%	N		1.7328E+00 (0.000E+00)	4.5045E-01 3.354856	1.0001E+00	
5	q Calc Date	Paramet	er Avg	Sa Act	Q	Net (Cnt Rt	Dpm W	o Blk Dpm-	Blk Vol Used	Y	ield,EnFo	t Chem Yld	,EFctU IDC/ILcC	BikLcC/N	ADC StdDvMdC	C/LcC
	04/11/06	FA-226	R	2.085554		1.6733	3E+00	1.37997		3 0.83	3 Sa	114%		0.402156			
				(0.331667)		(1.989	4E-01)	(0.2043)	38) (0.2043	38) (0.024495	5)			0.167401			
q	Status Metho	d Matrix	Protoc	(0.331667) d Equation S	et W	(1.989 /rk O rd	*****	The sections of the section	38) (0.2043 //BB Sa/On Date	(0.024495 AnalysisDate/PptW		ep2 Date	QC/Trace	0.167401 r Vial Mult/EntY	id Total/Analy	Vol Final/Cou	nt Vol
4	Status Metho Calc TE 000362LOT:J68	AIR	*STLE			/rk Ord	*****	atrix QC			t Sep1/S	ep2 Date 06 13:50 06 12:19	RATA2	r Vial Mult/EntY	0.833 \$	Sa	nt Vol
4	Calc TE	AIR	*\$TLE 3.21	ol Equation S	S HX8	/rk Ord	Units/Ma PCI/SA AIR	atrix QC	/BB Sa/On Date	AnalysisDate/PptW	t Sep1/S	06 13 :50 06 12 :19	RATA2	r Vial Mult/EntY	0.833 \$	Sa	nt Vol
4 ID	Calc TE	AIR 327015814 v4.8 Parame	*\$TLE 3.21	Ra226Wo	S HX8	/rk Ord	Units/Ma PCI/SA AIR Geom	atrix QC	/BB Sa/On Date 02/05/06 08:45	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent	04/05/0 04/10/0	06 13 :50 06 12 :19	RATA2 RATA2	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct	0.833 5 0.249267 5 Conv Fct/VolAc 4.5045E-01	Sa Sa Ij Decay	na mana
4 XID S	Calc TE :000362LOT:J68 q Cnt Date	AIR 327015814 v4.8 Parame 19 RA-226	*STLE 3.21 ter San 11 50	Equation S Ra226Woll Raple Cnt Bkg 8 60	S HX8	Instr	Units/Ma PCI/SA AIR Geom	atrix QC	02/05/06 08:45 Ent Efficiency1 V 2.0676E+00 (9.676E-02)	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00)	04/05/0 04/10/0 VId Fct 96% 8%	06 13:50 06 12:19 Ent N	RATA2 RATA2 Blk Value	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00	0.833 \$ 0.249267 \$ Conv FctVolAc 4.5045E-01 3.341793	Sa Sa Ij Decay	Abn
4 SID	Calc TE -000362LOT:J66 q Cnt Date -04/10/06 15:	AIR 327015814 v4.8 Parame 19 RA-226	*STLE 3.21 ter San 11 50 ter Avç	Equation S Ra226Woll Raple Cnt Bkg 8 60	3S HX8 rnd Cnt Q	Instr ASCKMI	Units/Ma PCI/SA AIR Geom D ASC	atrix QC	02/05/06 08:45 Ent Efficiency1 V 2.0676E+00 (9.676E-02) o Bik Dpm 7 0.0756	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Blk Vol Used	04/05/0 04/10/0 VId Fct 96% 8%	06 13:50 06 12:19 Ent N	RATA2 RATA2 Blk Value	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00)	0.833 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BlkLeC/I	Sa Sa Ij Decay 1.0001E+00	Abn
4 3D S	Calc TE 2000362LOT:J68 q Cnt Date 04/10/06 15:	AIR 327015814 v4.8 Parame 19 RA-226 Paramet	*STLE 3.21 ter San 11 50 der Avg	Ra226Wolf Ra226Wolf Table Cnt Bkg 8 60 Sa Act	o U4	Instr ASCKMI	Units/Ma PCI/SA AIR Geom D ASC Cnt Rt 57E-02 (7E-02)	Trc/Av 1 Y Dpm W 0.07567 (0.0713	02/05/06 08:45 Ent Efficiency1 V 2.0676E+00 (9.676E-02) o Bik Dpm 7 0.0756	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Blk Vol Used	04/05/0 04/10/0 VId Fct 96% 8% V	06 13:50 06 12:19 Ent N /ield,EnFo	RATA2* RATA2 Bik Value	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00) I,EFctU IDC/ILcc 0.386861	0.833 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BlkLcC/	Sa Sa Ij Decay 1.0001E+00	Abn C/LeC
4 ID S	Calc TE -000362LOT:J66 q Cnt Date -04/10/06 15: Sq Calc Date -04/11/06	AIR 327015814 v4.8 Parame 19 RA-226 Parame RA-226 d Matrix AIR	*STLE 3.21 11 50 R Protoc *STLE	Ra226Wolf Ra226Wolf Reple Cnt Bkg 8 60 Sa Act 0.113915 (0.107685)	SS HX8 rnd Cnt Q U4	Instr ASCKME Net 8.6666 (8.137	Units/Ma PCI/SA AIR Geom D ASC Cnt Rt 57E-02 (7E-02)	Trc/Av I Y Dpm W 0.07567 (0.0713'	02/05/06 08:45 Ent Efficiency1 N 2.0676E+00 (9.676E-02) o Blk Dpm 7 0.0756; 97) (0.0713	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Bik Vol Used 7 0.83 97) (0.024495 AnalysisDate/PptW	04/05/0 04/10/0 VId Fet 96% 8% 3 Sa 5)	06 13:50 06 12:19 Ent N /ield,EnFo	RATA2 RATA2 Bik Value Chem Yid	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00) I,EFctU IDC/ILcC 0.386861 0.157904 rr Vial Mult/EntY	0.833 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BlkLcC/l	Sa Sa Ij Decay 1.0001E+00 MDC StdDvMd0 y Vol Final/Cou	Abn C/LcC
4 ID S	Calc TE cooo362LOT:J66 q Cnt Date 04/10/06 15: Sq Calc Date 04/11/06 Status Metho	AIR 327015814 v4.8 Parame 19 RA-226 Parame RA-226 d Matrix AIR B27015815 v4.8	*STLE 3.21 ter San 11 50 er Avg Protoc *STLE	Ra226Wolf Ra226Wolf Raple Cnt Bkg 8 60 Sa Act 0.113915 (0.107685) of Equation S	C U4	Instr ASCKMI Net 8.6666 (8.137	Units/Ma PCI/SA AIR Geom D ASC Cnt Rt 67E-02 7E-02) Units/Ma	Trc/Av I Y Dpm W 0.07567 (0.0713	### Comparison of Comparison o	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Bik Vol Used 7 0.83 97) (0.024495 AnalysisDate/PptW	04/05/0 04/10/0 VId Fet 96% 8% 3 Sa 5)	06 13:50 06 12:19 Ent N //ield,EnFo 96% eep2 Date	RATA2 RATA2 Bik Value Chem Yid	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00) I,EFctU IDC/ILc0 0.386861 0.157904 Ir Vial Mult/EntY	0.833 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BlkLcC/l	Sa Sa Ij Decay 1.0001E+00 MDC StdDvMd0 y Vol Final/Cou	Abn C/LeC
4 ID S	Calc TE cooo362LOT:J68 q Cnt Date 04/10/06 15: Sq Calc Date 04/11/06 Status Metho Calc TE cooo363LOT:J68	AIR 327015814 v4.8 Parame 19 RA-226 Parame RA-226 d Matrix AIR B27015815 v4.8	*STLE 3.21 ter San 11 50 er Avg Protoc *STLE	Ra226Wolf Ra226Wolf Ra226Wolf Sa Act 0.113915 (0.107685) Colf Equation S	C U4	Instr ASCKMI Net 8.6666 (8.137	Units/Ma PCI/SA AIR Geom D ASC Cnt Rt 57E-02 (7E-02) Units/Ma PCI/SA AIR Geom	Trc/Av 1 Y Dpm W 0.07567 (0.0713 atrix QC	### Comparison of Comparison o	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Bik Vol Used 0.83 97) (0.024495 AnalysisDate/PptW 04/10/06 15:14	04/05/0 04/10/0 VId Fct 96% 8% V 3 Sa 55) Vt Sep1/S 04/10/0	06 13:50 06 12:19 Ent N //ield,EnFo 96% eep2 Date	RATA2* RATA2* Blk Value Chem Yid QC/Trace RATA2 RATA2	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00) I,EFetU IDC/ILeC 0.386861 0.157904 Ir Vial Mult/EntY 1360 1 1360 Alq 1055 Ingr Fct 1.7335E+00	0.833 \$ 0.249267 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BikLeC/I I 0.833 \$ 0.250936 \$ Conv Fct/VolAc 4.5045E-01	Sa Sa Ij Decay 1.0001E+00 MDC StdDvMd0 y Vol Final/Cou	Abn C/LeC
4 ID S	Calc TE -000362LOT:J66 q Cnt Date -04/10/06 15: Sq Calc Date -04/11/06 Status Metho -Calc TE -000363LOT:J66 q Cnt Date	AIR 327015814 v4.8 Parame 19 RA-226 Parame RA-226 d Matrix AIR B27015815 v4.8	*STLE 3.21 ter San 11 50 R Protoc *STLE 3.21 ter San	Ra226Wolf Ra226Wolf Raple Cnt Bkg 8 60 Sa Act 0.113915 (0.107685) of Equation S Ra226Wolf Ra226Wolf	C U4	Instr ASCKME 18.6666 (8.137 Vrk Ord	Units/Ma PCI/SA AIR Geom D ASC Cnt Rt 57E-02 (7E-02) Units/Ma PCI/SA AIR Geom	Trc/Av 1 Y Dpm W 0.07567 (0.0713 atrix QC	### Comparison of Comparison o	AnalysisDate/PptW 04/10/06 15:19 Efficiency 2 Ent 1.0000E+00 N (0.000E+00) Blk Vol Used 7 0.83 97) (0.024495 AnalysisDate/PptW 04/10/06 15:14 Efficiency 2 Ent	04/05/0 04/10/0 Yld Fct 96% 8% 3 Sa 5) /t Sep1/S 04/05/0 04/10/0 Yld Fct	06 13:50 06 12:19 Ent N Vield,EnFo 96% ep2 Date 06 13:50 06 12:14 Ent	RATA2* RATA2* Blk Value Chem Yid QC/Trace RATA2 RATA2	r Vial Mult/EntY 1359 1 1359 Alq 96% Ingr Fct 1.7328E+00 (0.000E+00) I,EFctU IDC/ILcC 0.386861 0.157904 Ir Vial Mult/EntY 1360 1 1360 Alq 1059 Ingr Fct	0.833 \$ 0.249267 \$ 0.249267 \$ Conv Fct/VolAc 4.5045E-01 3.341793 BikLeC/I I 0.833 \$ 0.250936 \$ Conv Fct/VolAc 4.5045E-01	Sa Sa Ij Decay 1.0001E+00 MDC StdDvMdc y Vol Final/Cou Sa Sa dj Decay	Abn C/LeC

В	atch Nbr: 60	060342			Al	pha	Beta,	, на-	226	by AS	C-7 , C	alcul	ated	Resu	lts		4/11/2	006 4:21:06 I
Sq	Calc Date	Parameter	Avg	Sa Act	Q .	Net C	nt Rt	Dpm W	o Bik	Dpm-B	lk Vol	Used		Yield,EnFc	t Chem Yld	EFetU IDC/ILeC	BlkLcC/MDC	StdDvMdC/Lc
	04/11/06	RA-226		0.111511 (0.089664)	U4	1.10000		0.07456 (0.0598	_	0.074569 (0.059803	. ,	0.833 024495)		105%		0.313134 0.129172		
Sq St	atus Method	Matrix	Protoco	Equation Set	Wrl	COrd	Units/M	atrix QC	/BB S	a/On Date	AnalysisDa	te/PptWt	Sep1/	Sep2 Date	QC/Trace	Vial Mult/EntY	id Total/Analy Vo	Final/Count \
16 Ca CID:IN	AIC TE TRA-LAB BLAN			Ra226WoBS 4.8.21	HOEQ	51AA	PCI/SA AIR	B	02/05	5/06 06:00	04/10/06	15:19		6/06 13:50 0/06 12:19	RATA21 RATA21	361 1 361 Alq 1129	1.00 S a 6 1.00 S a	ممتعوضي سائلت سائلة والأفارات
Sq	Cnt Date	Parameter	Samı	ple Cnt Bkgrnd	Cnt :	Instr	Geom	Trc/Av	Ent E	fficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj D	ecay Al
1 0	4/10/06 15:19	RA-226	8 50	18 60	A	SCPMA	ASC	Y			1.0000E+00 (0.000E+00)	N	112% 9%	N		1.7328E+00 (0.000E+00)		0001E+00
Sq	Calc Date	Parameter	Avg	Sa Act	a	Net C	nt Rt	Dpm W	o Blk	Dpm-B	lk Vol	Used		Yield,EnFc	Chem Yid	EFctU IDC/ILc0	BIKLcC/MDC	StdDvMdC/L
	04/11/06	RA-226		-0.044559 (0.029175)	U4	-1.4000 (9.0554		-0.0989 (0.0645		-0.098914 (0.064552	•	1.00 (017321)		112%		0.13189 0.057354		
Sq St	atus Method	Matrix	Protoco	Equation Set	Wrl	(Ord	Units/M	atrix QC	/BB S	a/On Date	AnalysisDa	ite/PptWt	Sep1/	Sep2 Date	QC/Trace	Vial Mult/EntY	Id Total/Analy Vo	Final/Count \
17 Ca CID:IN	alc TE TRA-LAB CHEC			Ra226WoBS 4 8 21	H0EQ	51AC	PCI/SA AIR	S	02/05	5/06 06:00	04/10/06	15:44		5/06 14:30 5/06 12:44	RASC40		1.00 Sa 6 1.00 Sa	on about all admirate delth 1755 A. Abouthday stronger
Sq	Cnt Date	Parameter	Samı	ple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent E	fficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VofAdj D	ecay At
1 0	4/10/06 15:44	RA-226	242 50	21 60	A	SCOMO		Y			1.0000E+00 (0.000E+00)	N	100% 8%	N		1.7351E+00 (0.000E+00)	4.5045 E-01 1.00	0001E+00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	-	Dpm W	o Blk	Dpm-8	lk Vol	Used		Yield,EnFc	t Chem Yld.	EFetU IDC/ILeC	BlkLcC/MDC	StdDvMdC/Lo
	04/11/06	RA-226		1.402085 (0.182894)		4.49000 (3.2036		3.11241 (0.3710	-	3.112413 (0.371093	• •	1.00 017321)		100%	103%	0.138412 0.06078		

RecCnt:17

RADCALC v4.8.21

STL Richland

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 5

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

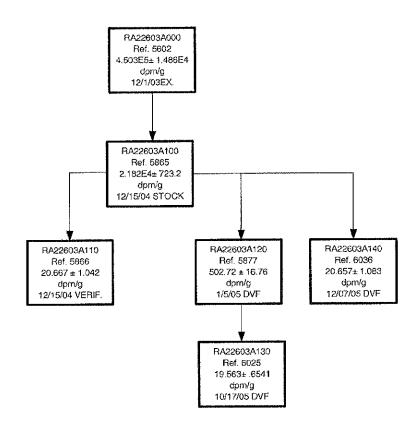
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RADIUM 226 STANDARDS AND TRACEABILITY

al Identifier	Constituent Prep Activity/Concentration Parent Standard: RA22603A140 F			Std Wt 1	Jsea Prep,Dec	Prep,Decayed To Date Prep by Std Decayed Activity/Concentration 2.0657E+01 ± 5.242E+00 DPM/G			
				Ref; 12/15/20	04 2.0657E				
SC4036	RA-226	3.0329E+0	00 ± 7.696E-01	DPM 0.1469	g 3/13/2006	3/13/2006	Armstron 2.0646E+0	1 ±5.239E+00	DPM/
		3.0329E-	3.0329E+000 ± 3.033E+000 (3.0329E	3.0329E+000 , 3.0329E+000			
				•					
							•		

* - Isotope is an Impurity

RA22603A000



RA22603A

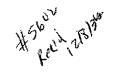
ISOTOPE DILUTION RECORD

1) Prepared by tda	2) Date Prepared	12/7/2005
3) Source Identification Number / Ref. Number	RA22603A100	5865
4) Source Activity (dpm ± dpm/g)	2.1810E+04 ±	7.229E+02
5) Percent error of Source Activity	3.314 %	
6) Weight of Source Material used (g)	0.1184	
7) (% Error) of Weight of Source Material used	4.0541 %	
8) Diluent	1 M HCL	
9) Total Weight of the Dilution (g)	125.01	
10) (% Error) of Total Weight of the Dilution	0.2400 %	
11) Specific Activity of Diluted Solution dpm/g	2.0657E+01 ±	1.083E+00
12) Total Uncertainty	5.242 %	
13) Dilution Identification Number / Ref. Number	RA22603A140	6036
14) Calibration Reference Date	12/7/2005	
15) Isotope Inventory File update by/date	tda	12/7/2005
16) Reviewed by/date	SEW	1/17/2006
17) Location	18) Exhausted	****
**************************************	***************	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3



ANALYTICS



1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 • U.S.A.

> Phone (404) 352-8677 Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

67269-310

Ra-226 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

Analytics maintains traceability to the National Institute of Standards and Technology through participation in a Measurements Assurance Program as described in USNRC Reg. Guide 4.15, Revision 1, February 1979.

ISOTOPE:

Ra-226

ACTIVITY (dps):

3.753 E4

HALF-LIFE:

1.600 E3 years

CALIBRATION DATE:

December 1, 2003 12:00 EST

RELATIVE EXPANDED

UNCERTAINTY (k=2):

3 3%

Impurities: γ-impurities <0.1% (other than decay products)

5.00107 grams 0.1M HCl solution with 50 $\mu g/g$ Ba carrier.

Master solution ID#: P8V83.

P O NUMBER 2036005/300260, Item 1

SOURCE PREPARED BY:

maskaeve

M. Taskaeva, Radiochemist

Q A APPROVED:

m. mt 3 12-4-03

ISOTOPE RECORD FORM

1) Isotope	Ra-226	2) Reference Number	5601							
3) Half Life	1600 yrs.	4) Storage Location	STLB							
	ntification Number_	Ra22603A000								

CALIBRATION DATA										
6) Activity as Re	eceived Units	3.753E4 dps								
7) Overall Unce	rtainty Percent	3.3%								
8) Reference D	ate / Time	12/1/03 12:00 EST (9:00AM)								
9) Activity dpn	n/g	4.5026E5 ± 14859E4 dpm/g								
10) Volume or N	/lass (ml/g)	5.00107g								
11) Calibrated b	y	ANALYTICS								
12) Certificate S	Solution Number	67269-310								
********	******		*******							
		SURVEY DATA								
13) Date Receiv	/ed .	Market and the second	12/8/2003							
14) Surveyêd bi	y	W.G								
15) Survey Rea	ding (Beta/Gamma)	срт	<1K							
16) Survey Rea	ding (Alpha) cpm	<bkg< td=""></bkg<>								
*******	*******	**********	·*********							
17) Activity Con	oversion 3.753E+	4dpsx60s/m/5.00107g= 4.50	3E+5 ± 1.49E+04 dpm/g							
18) Remarks										
10/ Nomano _										
19) Isotope File	Updated by	WG.12/11/0	3							
20) QC Approve	•	GE 12/								
ZO, QU APPIOVI	o u	7-11								

RA22603C000

RA22603A000 Ref. 5602 4.503E5± 1.486E4 dpm/g 12/1/03

12/11/2003		/12/03 SMIdetifier	Stand			S xoluding Consumed Sid ,0	Order by SMide	entifier
SM Identifier	SM Identifier2	Quantity	Density	Store Loc	Supplier	Supplier Id and Lot	Rec Date	Ref Date
RA22603A000	5602	5.00107 g		PM	ANAL (L)	67269-310	12/8/2003	12/1/2003
10.220001.000	RA-226 4.5026E+05 ± 1.486E+04 DPM/G			Decayed Activity:	4,5026E+05	±1,486E+04		
					······	Total Activity:	2.2518E+006	DPM

STL Richland, Standard Materials v4.710

Page 1

Record Count: 1

ISOTOPE RECORD FORM

1) Isotope	2) Reference Number # 5602
3) Half Life 1,600 103 415	4) Storage Location QC Lab
5) Source Identification Number	R922603 A000
**************	CALIBRATION DATA
6) Activity as Received Units	3.753E4 dps
7) Overall Uncertainty Percent	3,3%
8) Reference Date / Time	11/03 12:00 EST (9:00 AM)
9) Activity dpm/g	4.5024X105 ± 1.4859 X104 dpm/g
10) Volume or Mass (mL /g)	5,00/079
11) Calibrated by	5,00107g Anglytics
12) Certificate Solution Number	67269-310
***********	SURVEY DATA
13) Date Received	12/8/3
14) Surveyed by	M
15) Survey reading (Beta/Gamma) cpm	LIK
16) Survey Reading (Alpha) cpm	< OKG
17) Activity Conversion 37530	14858.70024 dpm/g
450263.6436 ±	14858.70024 dpm/g
18) Remarks	* 0
19) Isotope File Updated by	VA 12/11/3
20) QC Approved	



- ANALYTICS

Rec'd 12/8/312

1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318-U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837
email: analytics@mindspring.com
www.analyticsinc.com

www.analyticsinc.com
SHIPPER'S DECLARATION
Shipment number 20736-11747 contains the following isotopes:
FORM: LIQUID
Radionuclide QUANTITY IN MICROCURIES* Ra-226 1.01
TOTAL: 1.01
This package conforms to the conditions and limitations specified in 49 CFR 173.421 for radioactive material, excepted package-limited quantity of material, UN2910.
SHIPPED TO: SEVERN TRENT LABS STL RICHLAND
DATE: 12.4.03 T= 1Cool
*Quantities stated are approximate and for shipping purposes only. For certified quantities see Certificate of Calibration for each radioactive standard.



ANALYTICS

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Phone (404) 352-8677 Fax (404) 352-2837 email: analytics@mindspring.com www.analyticsinc.com

PACKING LIST

SEVERN TRENT LABORATORIES

STL RICHLAND

2800 GEORGE WASHINGTON WAY

RICHLAND

ATTN:

FOR:

LINE QTY NUMBER SHIP

DESCRIPTION

WA 99352-1613

.

011747

BOX 1 OF 1

12.4.03

20736-11747

2036005/300260

ORDER#

SHIPPING DATE

SHIPMENT NO.

P. O. NUMBER

REQ/RELEASE NO.

SRS 67269-310 RA-226 5 ML LIQUID IN FLAME SEALED VIAL CALIBRATION STANDARD, 1.01 UCI 0.1M HCL SOLUTION ***STOCK***

CALIBRATION CERTIFICATES ARE ENCLOSED IN THIS BOX 71

LIMITED WARRANTY

ANALYTICS warrants that at the time of shipment the products sold by it are free from defects in material and workmanship and conform to specifications, which accompany the product. ANALYTICS makes no other warranty, expressed or implied, with respect to the products, including any warranty of merchantability or fitness for any particular purpose. Complaints of breach of warranty on radioactive products must be received in writing by ANALYTICS within two half-lives of the radioactive material or 30 days, whichever first occurs. The maximum liability for any breach of warranty shall be replacement of the product or refund of the invoice price of the product. ANALYTICS shall in no case be liable for special, incidental or consequential damages of any kind.



ANALYTICS

1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 - U.S.A.

Phone (404) 352-8677 Fax (404) 352-2837 email: analytics@mindspring.com www.analyticsinc.com

Important MSDS Information Enclosed

Ra-226 Radioactive Liquid Calibration Standard

Enclosed is the Material Safety Data Sheet (MSDS) for the item above which meets the OSHA Hazard Communication Standard criteria. The ingredients are:

Radioactive Nuclides

MSDS-1002 Hydrochloric Acid (not more than 24%)

This information provides conservative chemical safety guidelines for handling the pure forms of the ingredients.

The hazards of radioactivity are regulated by the U.S. Nuclear Regulatory Commission under Title 10, parts 19, 20, 30, 31 and 35 of the Code of Federal Regulations. The hazards of radioactivity are not addressed in the enclosed safety information.

MATERIAL SAFETY DATA SHEET

MSDS NUMBER : MSDS-1002

MATERIAL IDENTIFICATION. RADIOACTIVE MATERIAL IN HYDROGHLORIC ACID SOLUTION (NOT MORE THAN 24%)

REVISION DATE: APRIL 1, 1999

ANALYTICS, INC. 1380 SEABOARD IND. BLVD. ATLANTA, GEORGIA 30318 404-352-8677

EMERGENCY NUMBERS: CHEM-TEL 800-255-3924 (US) 813-248-0585 (INT'L) (call collect)

THIS INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES.

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

SUBSTANCE: HYDROCHLORIC ACID SOLUTION

TRADE NAME & SYNONYMS: CHLORIHYDRIC ACID, HYDRO CHLORIDE, MURIATIC ACID

DOT SHIPPING NAME: HYDROCHLORIC ACID (NOT MORE THAN 24%)

FORMULA: HCL

CHEMICAL FAMILY: INORGANIC ACID

COMPONENT: HYDROCHLORIC ACIDO.04% - 24%

PERCENT: OSHA PEL 5 PPM

ACGIH TLV N/A

NFPA RATINGS: HEALTH=3 FIRE=0 REACTIVITY=1

CAUTION: CONTAINS RADIOACTIVE MATERIAL WHICH, ALTHOUGH BEYOND THE SCOPE OF MSDS REQUIREMENTS, SHOULD BE CONSIDERED THE PRINCIPAL HAZARD. THIS MATERIAL SHOULD BE HANDLED

ONLY BY TRAINED INDIVIDUALS IN CONFORMANCE WITH 10 CFR REQUIREMENTS.

PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: CLEAR, COLORLESS SOLUTION WITH PUNGENT ODOR

BOILING POINT: 100 C. TO 109 C

SPECIFIC GRAVITY: 1.00 TO 1.18

VAPOR PRESSURE: 3,040 mm Hg @ 17.8 C

MELTING POINT: N/A

VAPOR DENSITY (AIR): APPROX. 1.2

EVAPORATION RATE: 1

SOLUBILITY IN WATER: INFINITE

pH: 0+ TO 3.0

FIRE AND EXPLOSION HAZARD DATA

AUTO IGNITION TEMP .: N/A FLAMMABLE LIMITS: N/A FLASH POINT: N/A

LEL: N/A

UEL: N/A

EXTINGUISHABLE MEDIA: WATER SPRAY

FIRE FIGHTING: FULL PROTECTIVE CLOTHING AND NIOSH APPROVED POSITIVE PRESSURE SCBA SHOULD

BE WORN.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CAUTION. MAY PRODUCE AIRBORNE RADIOACTIVE

MATERIALS DURING FIRE. CONSULT HEALTH PHYSICS/RADIATION SAFETY STAFF.



U.S. DEPARTMENT OF COMMERCE

National Institute of Standards & Technology Gaithersburg, MD 20899

Certificate of Participation

Analytics, Incorporated Atlanta, Georgia

is a participant for the period January 1, 2003, through December 31, 2003, in a radioactivity measurements assurance program conducted by the National Institute of Standards and Technology, in cooperation with the Nuclear Energy Institute. Continued participation is evidenced by dated Reports of Traceability issued for particular radionuclides, which indicate the deviation of the participant's reported value from that measured by the National Institute of Standards and Technology. The significance of these Reports is addressed on the back of this certificate.

For the Director,

Lisa R. Karam, Group Leader

Radioactivity Group Physics Laboratory

(over)

Vial identifier	r Constituent Prep Activity/Concentration		Ì	Std Wt U	Jsed	Prep,Decay	yed To Date	Prep by Std Decaye	d Activity/Conc	entration	
	Parent 9	Standard: RA22	803A150	Ref	: 9/2/2005		9.9991E+0	01 ± 2.466	E+00 DPM/G		ļ
RASC4036	RA-228	1.1179E+01	± 2.760E-01	DPM	0.1191	g	3/13/2006	3/13/2006	Armstron 9.3859E+01	±2.315E+00	DPM/G
		1.1179E+00	01 ± 1.118E+0	01 (1	1)	•	1.1179E+	-001 , 1.117	'9E+001		

STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

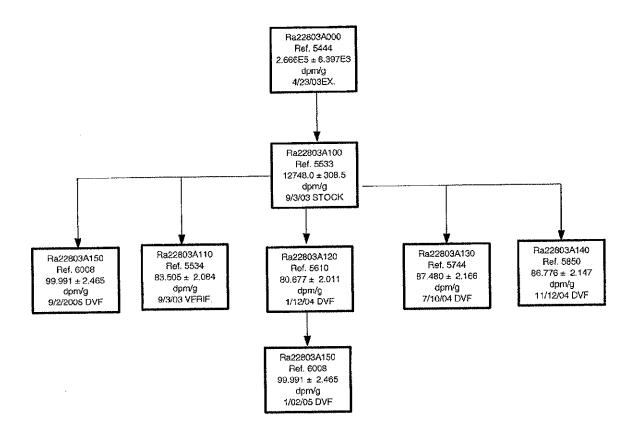
Page 4

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Record Count: 4

Ra22803A000

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RA22803A

ISOTOPE DILUTION RECORD

1) Prepared by TDA		2) Date Prepared	9/2/2005
3) Source Identification	Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm		1.0020E+04 ±	2.426E+02
5) Percent error of Source Act	ivity	2.42 %	
6) Weight of Source Material u	used (g)	1.1976	
7) (% Error) of Weight of Sour	ce Material used	0.4008 %	·
8) Diluent		1 M TM HCL	
9) Total Weight of the Dilution	(g)	120.01	
10) (% Error) of Total Weight	of the Dilution	0.2500 %	
11) Specific Activity of	Diluted Solution dpm/g	9.9991E+01 ±	2.465E+00
12) Total Uncertainty		2.466 %	
13) Dilution Identification	on Number / Ref. Number	RA22803A150	6008
14) Calibration Reference Dat	e	9/2/2005	
15) Isotope Inventory File upd	ate by/date	TDA	9/2/2005
16) Reviewed by/date		SEW	9/13/2005
17) Location QCLA	<u>AB</u>	18) Exhausted	
******	**************************************	*******	**
	CALCULATIONS	3	
7) % Error of Wt. used = (0.00	48 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source	Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty =	(% error of Source Activity ^2 +	% error of Wt. Used^2 + % error	of Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

RA22803A.XLW

ISOTOPE DILUTION RECORD

Prepared byTDA	2) Date Prepared	9/2/2005
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.0020E+04 ±	2.426E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	1.1976	
7) (% Error) of Weight of Source Material used	0.4008 %	
3) Diluent	1 M TM HCL	
Total Weight of the Dilution (g)	120.01	
10) (% Error) of Total Weight of the Dilution	0.2500 %	
11) Specific Activity of Diluted Solution dpm/g	9.9991E+01 ±	2.465E+00
12) Total Uncertainty	2.466 %	
13) Dilution Identification Number / Ref. Number	RA22803A150	6008
4) Calibration Reference Date	9/2/2005	
5) Isotope Inventory File update by/date	TDA	9/2/2005
16) Reviewed by/date	SEW	9/13/2005
17) Location QCLAB	18) Exhausted	
	**************************************	•
7) % Error of Wt. used = (0.0048 / Weight of Source Material use		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material us	sed / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2	+ % error of Wt. Used^2 + % error o	of Dilution Wt.^2)

RA22803A.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	11/12/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.1068E+04	± 2.678E+02
5) Percent error of Source Activity	2.420 %	
6) Weight of Source Material used (g)	1.0426	
7) (% Error) of Weight of Source Material used	0.4604 %	
8) Diluent	1M HCL-P0400341	
9) Total Weight of the Dilution (g)	132.98	
10) (% Error) of Total Weight of the Dilution	0.2256 %	
11) Specific Activity of Diluted Solution dpm/g	8.6776E+01	± 2.147E+00
12) Total Uncertainty	2.474 %	
13) Dilution Identification Number / Ref. Number	RA22803A140	5850
14) Calibration Reference Date	11/12/2004	
15) Isotope Inventory File update by/date	W.G	11/12/2004
16) Reviewed by/date	SEW	11/12/2004
17) Location QCLAB/STWT1077	18) Exhausted	
*********************		***
CALCULATIONS	•	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	l / Total Wt. of the Dilution	
10) % Total Uncertainty - (% arror of Source Activity ^2 + 5	% error of Wt. Used^2 + % erro	r of Dilution Wt.^2)

RA22803A.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	7/10/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.1506E+04	2.785E+02
5) Percent error of Source Activity	2.420 %	
6) Weight of Source Material used (g)	1.0166	
7) (% Error) of Weight of Source Material used	0.4722 %	
8) Diluent	1M HCL-P0400341	
9) Total Weight of the Dilution (g)	133.71	
10) (% Error) of Total Weight of the Dilution	0.2244 %	
11) Specific Activity of Diluted Solution dpm/g	8.7480E+01 ±	2.166E+00
12) Total Uncertainty	2.476 %	
13) Dilution Identification Number / Ref. Number	RA22803A130	5744
14) Calibration Reference Date	7/10/2004	
15) Isotope Inventory File update by/date	W.G	7/10/2004
16) Reviewed by/date	SEW	7/13/2004
17) Location QCLAB/STWT1015	18) Exhausted	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	**************************************	:
CALCULATIONS	5	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material use	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	1/12/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.2209E+04 ±	2.955E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	0.8710	
7) (% Error) of Weight of Source Material used	0.5511 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	131.81	
10) (% Error) of Total Weight of the Dilution	0.2276 %	
11) Specific Activity of Diluted Solution dpm/g	8.0677E+01 ±	2.011E+00
12) Total Uncertainty	2.492 %	
13) Dilution Identification Number / Ref. Number	RA22803A120	5610
14) Calibration Reference Date	1/12/2004	
15) Isotope Inventory File update by/date	W.G	1/12/2004
16) Reviewed by/date	SEW	1/15/2004
17) Location QCLAB/STWT0897	18) Exhausled	
CALCULATIONS		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used *	100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	/ Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + %	6 error of Wt. Used^2 + % error o	of Dilution Wt.^2)

Ra22803a.xlw

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/3/2003
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.2748E+04 ±	3.085E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	0.8494	
7) (% Error) of Weight of Source Material used	0.5651 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	129,67	
10) (% Error) of Total Weight of the Dilution	0.2314 %	
11) Specific Activity of Diluted Solution dpm/g	8.3505E+01 ±	2.084E+00
12) Total Uncertainty	2.496 %	
13) Dilution Identification Number / Ref. Number	RA22803A110	5534
14) Calibration Reference Date	9/3/2003	
15) isotope inventory File update by/date	W.G	9/3/2003
16) Reviewed by/date	SEW	9/4/2003
17) Location QCLAB/STWT0842	18) Exhausled	**************************************
*********************	***************	**
CALCULATIONS	5	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error	of Dilution Wt.^2)

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12) % Total Uncertainty =

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/3/2003
3) Source Identification Number / Ref. Number	RA22803A000	5444
4) Source Activity (dpm ± dpm/g)	2.5563E+05 ±	6.135E+03
5) Percent error of Source Activity	2.4 %	
6) Weight of Source Material used (g)	5.02032	
7) (% Error) of Weight of Source Material used	0.0956 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	100.67	
10) (% Error) of Total Weight of the Dilution	0.2980 %	
11) Specific Activity of Diluted Solution dpm/g	1.2748E+04 ±	3.085E+02
12) Total Uncertainty	2,420 %	
13) Dilution Identification Number / Ref. Number	RA22803A100	5533
14) Calibration Reference Date	9/3/2003	
15) Isotope Inventory File update by/date	W.G	9/3/2003
16) Reviewed by/date	SEW	9/4/2003
17) Location QCLAB/STWT0841	18) Exhausted	
***************************************	· ተፈጽጽጵ አው ሂት የሚነት የሚነት አለት የሚያት ነው።	**
CALCULATIONS	3	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error of	of Dilution Wt.^2)

Form: CC-006

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SEVERN FERENT

ISOTOPE RECORD FORM

1) Isotope RA-228	2) Reference Numbe 5444					
3) Haif Life 5.75 yrs	4) Storage Location QCLAB					
5) Source Identification No	lun RA22803A000					

6) Activity as Received Units23520.0 dps						
7) Overall Uncertainty Perce	ent					
8) Reference Date / Time	04/23/03 12:00 EST (9.00AM)					
9) Activity dpm/g	2.6710E+05 ± 6.397E+3 dpm/g					
10) Volume or Mass (ml/g)	5.28350g					
11) Calibrated by	ANALYTICS					
12) Certificate Solution Numb	be65743-310					
*********************************	**************************************					
13) Date Received	4/25/2003					
14) Surveyed by	<i>W.</i> G					
15) Survey Reading (Beta/Gamma) cpm < 2K						
16) Survey Reading (Alpha)	cpm < 1K					
*************	 ***********************************					
17) Activity Conv æs 520.0 dps*60s/m/5.28350g=2.6710E+5 ± 6.397E+3dpm/g						
18) Remark Used	d all to make first dilution 9/3/03 wg					
19) Isotope File Updated by	04/29/03 W.G					
20) QC Approved						



ANALYTICS

1380 Seaboard industrial Bivd.
Atlanta, Georgia 30318 · U.S.A.
Phone (404) 352-8677

Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

65743-310

Ra-228 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:

Ra-228

ACTIVITY (dps):

2.352 E4

HALF-LIFE:

5.75 years

CALIBRATION DATE:

April 23, 2003 12:00 EST

TOTAL UNCERTAINTY*:

2.4%

*95% Confidence Level

Impurities: γ -impurities (other than decay products) <0.1%, Ra-226 <0.1%

5.28350 grams 4M HCl solution with 100 $\mu g/g$ Ba carrier.

P O NUMBER 1735885-000 OP, Item 1

Produced from master solution P111V105.

SOURCE PREPARED BY:

Marraeve

M. Taskaeva, Radiochemist

Q A APPROVED:

4-23-03

RADIUM 226 CONTINUING CALIBRATION

Quality Assurance Report. Generated 26-MAY-2006 11:35:39.92

QA Filename : \$DISK1:[SCINT1.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-1

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 253202.000000 Upper Bound : 272606.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 262904.093750 Std Deviation : 3234.747803

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 11:30	count	267892.00	000	-
2-MAR-2006 14:29	count	263403.00	000	
3-MAR-2006 09:13	count	263940.00	000	
6-MAR-2006 09:27	count	266790.00	000	
7-MAR-2006 10:11	count	264489.00	000	
13-MAR-2006 06:44	count	262924.0	000	
14-MAR-2006 07:56	count	269129.0	000	
15-MAR-2006 06:21	count	262111.0	000	
16-MAR-2006 07:30	count	268251.0	000	
17-MAR-2006 08:12	count	268652.0	000	
20-MAR-2006 06:02	count	263659.0	000	
21-MAR-2006 08:29	count	265211.0	000	
22-MAR-2006 07:10	count	263169.0	000	
23-MAR-2006 06:16	count	262061.0	000	
24-MAR-2006 06:28	count	264487.0	000	
26-MAR-2006 07:33	count	266234.0	000	
27-MAR-2006 05:42	count	260475.0	000	
28-MAR-2006 06:26	count	265175.0	000	
29-MAR-2006 06:16	count	265254.0	000	
30-MAR-2006 06:32	count	263095.0	000	
31-MAR-2006 06:05	count	262093.0	000	

3-APR-2006 06:28 count	263294.0000
4-APR-2006 07:04 count	264121.0000
5-APR-2006 06:43 count	265454.0000
6-APR-2006 06:32 count	264968.0000
7-APR-2006 05:30 count	262431.0000
8-APR-2006 09:01 count	263572.0000
10-APR-2006 05:29 count	264082.0000
11-APR-2006 06:06 count	265716.0000
12-APR-2006 08:52 count	264582.0000

Generated 26-MAY-2006 11:35:40.34

QA Filename : \$DISK1:[SCINT1.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000min bkg, ascint-1

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.000000 Std Deviation : 0.000000

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 09:35 count 0.0000 | | |

Generated 26-MAY-2006 11:35:46.16

QA Filename

: \$DISK1:[SCINT2.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-2

Parameter Units : counts

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 249750.000000

Upper Bound : 268866.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 259307.890625

Std Deviation: 3185,889160

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 11:46	count	262001.00	000	
3-MAR-2006 09:38	count	259993.00	000	
6-MAR-2006 09:47	count	263954.00	000	
7-MAR-2006 10:22	count	258764.00	000	
8-MAR-2006 11:31	count	264128.00	000	
13-MAR-2006 07:00	count	257949.00	000	
14-MAR-2006 10:15	count	265671.00	000	
15-MAR-2006 06:37	count	258396.00	000	
16-MAR-2006 07:42	count	261890.00	000	
17-MAR-2006 08:41	count	262046.00	000	
20-MAR-2006 06:19	count	260931.00	000	
21-MAR-2006 08:51	count	261304.00	000	
22-MAR-2006 07:23	count	258334.00	000	
23-MAR-2006 06:33	count	260426.0	000	
24-MAR-2006 06:47	count	260061.0	000	
27-MAR-2006 05:58	count	258457.00	000	
28-MAR-2006 06:43	count	260833.0	000 -	
29-MAR-2006 08:06	count	260543.00	000	
30-MAR-2006 08:03	count	261556.00	000	
31-MAR-2006 06:18	count	258764.00	000	
3-APR-2006 06:42	count	258763.000	00	

4-APR-2006 08:24 count	259749.0000	
5-APR-2006 06:57 count	263289.0000	
6-APR-2006 09:31 count	263158.0000	
7-APR-2006 05:52 count	258259.0000	
8-APR-2006 10:36 count	260722.0000	
10-APR-2006 05:42 count	260165.0000	
11-APR-2006 06:21 count	263821.0000	
12-APR-2006 09:15 count	259594.0000	

Generated 26-MAY-2006 11:35:46.57

QA Filename

: \$DISK1:[SCINT2.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description

: 1000 min bkg, ascint-2

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUN-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 0.000000

Std Deviation: 0.000000

Measurement Time

Sample ID Sample Analyst

Value LU|SD|UD|BS Rej

31-MAR-2006 08:36 count

0.0000 + | + |

Quality Assurance Report. Generated 26-MAY-2006 11:35:52.51

QA Filename : \$DISK1:[SCINT3.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-3

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 249127.000000 Upper Bound : 267709.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 258418.078125 Std Deviation : 3097.009277

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 12:02	count	259635.0	0000	
3-MAR-2006 09:56	count	258251.0	0000	
6-MAR-2006 09:58	count	260089.0	0000	
7-MAR-2006 10:34	count	260327.0	0000	
13-MAR-2006 07:30	count	255255.0	0000	
14-MAR-2006 10:27	count	263316.0	0000	
15-MAR-2006 06:54	count	258146.0	0000	
16-MAR-2006 07:58	count	259922.0	0000	
17-MAR-2006 08:52	count	260551.0	0000	
20-MAR-2006 06:31	count	260514.0	0000	
21-MAR-2006 09:04	count	260835.6	0000	
22-MAR-2006 07:36	count	257730.0	0000	
23-MAR-2006 06:47	count	260072.0	0000	
24-MAR-2006 06:59	count	259768.0	0000	
27-MAR-2006 06:10	count	257147.0	0000	j
28-MAR-2006 07:12	count	260280.0	0000	
29-MAR-2006 08:20	count	262036.0	0000	
30-MAR-2006 08:16	count	261880.0	0000	
31-MAR-2006 06:31	count	257366.0	0000 i i	
3-APR-2006 06:54	count	256127.00	000	,
4-APR-2006 09:57	count	257667.00	000	

263736.0000	
260878.0000	
259126.0000	
260992.0000	
262152.0000	
264364.0000	
257991.0000	
	260878.0000 259126.0000 260992.0000 262152.0000 264364.0000

Generated 26-MAY-2006 11:35:53.13

QA Filename : \$DISK1:[SCINT3.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-3

Parameter Units : counts Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.000000 Std Deviation : 0.000000

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 08:36 count 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:35:57.89

QA Filename : \$DISK1:[SCINT4.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-4

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 468554.000000 Upper Bound : 533576.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 501064.781250 Std Deviation : 10837.329102

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 10:38 count 512904.0000 513699.0000 2-MAR-2006 12:50 count 6-MAR-2006 08:32 count 507483.0000 7-MAR-2006 10:22 count 507221.0000 8-MAR-2006 08:31 count 522555.0000 513259.0000 13-MAR-2006 06:44 count 14-MAR-2006 09:45 count 509544.0000 500748,0000 15-MAR-2006 06:21 count 496598.0000 16-MAR-2006 07:02 count 17-MAR-2006 08:12 count 507548.0000 20-MAR-2006 06:02 count 514527.0000 21-MAR-2006 08:29 count 519867.0000 23-MAR-2006 06:16 count 515589.0000 24-MAR-2006 06:28 count 506480.0000 27-MAR-2006 05:42 count 514713.0000 28-MAR-2006 06:26 count 510895.0000 29-MAR-2006 06:16 count 528918.0000 510238.0000 30-MAR-2006 08:03 count 31-MAR-2006 06:14 count 504721.0000 3-APR-2006 06:28 count 508173.0000

513802.0000

4-APR-2006 07:04 count

5-APR-2006 06:43 count	512776.0000	
6-APR-2006 06:32 count	516741.0000	
7-APR-2006 05:32 count	506770.0000	
8-APR-2006 09:01 count	500642.0000	
10-APR-2006 05:29 count	533529.0000	In
11-APR-2006 06:06 count	511974.0000	
12-APR-2006 09:15 count	518994.0000	

Quality Assurance Report. Generated 26-MAY-2006 11:35:58.30

QA Filename : \$DISK1:[SCINT4.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-4

Parameter Units : counts Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : ----- End Date : -----

Mean : 5.383333 Std Deviation : 18.094940

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 12:33 count 4.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:36:04.23

QA Filename : \$DISK1:[SCINT5.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-5

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 425642.000000 Upper Bound : 477409.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 21-SEP-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 451525.843750 Std Deviation : 8627.839844

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:13 count 505712.0000 Ab|Ac| | 504298.0000 Ab|Ac| | 3-MAR-2006 09:24 count 503420.0000 Ab|Ac| | 6-MAR-2006 08:54 count 6-MAR-2006 09:06 count 502677.0000 Ab|Ac| | 514861.0000 Ab|Ac| | 7-MAR-2006 08:24 count 515068.0000 Ab|Ac| 7-MAR-2006 10:10 count 8-MAR-2006 09:21 count 507550.0000 Ab|Ac| | 506813.0000 Ab|Ac| | 8-MAR-2006 09:37 count 495232.0000 Ab|Ac| | 13-MAR-2006 07:00 count 490963.0000 Ab|Ac| | 13-MAR-2006 07:13 count 496014.0000 Ab|Ac| | 14-MAR-2006 09:01 count 486854.0000 Ab|Ac| | 15-MAR-2006 06:37 count 487956.0000 Ab|Ac| | 15-MAR-2006 06:53 count 16-MAR-2006 08:00 count 504216.0000 Ab|Ac| | 487462.0000 Ab|Ac| | 17-MAR-2006 09:38 count 20-MAR-2006 06:19 count 499646.0000 Ab|Ac| | 21-MAR-2006 10:12 count 496616.0000 Ab|Ac| | 497787.0000 Ab|Ac| | 22-MAR-2006 07:06 count 499836.0000 Ab|Ac| | 23-MAR-2006 06:33 count 23-MAR-2006 07:29 count 443014.0000 23-MAR-2006 09:11 count 438474.0000

Measurement Time Sample ID	Sample Analyst Value LU SD U
Quality Assurance Multi-Test Full	Report (continued) Page: 2
10-APR-2006 05:42 count	453452.0000
8-APR-2006 10:47 count	440112.0000
8-APR-2006 09:21 count	433377.0000 In
7-APR-2006 05:51 count	438792.0000
6-APR-2006 08:28 count	439439.0000 []
5-APR-2006 06:57 count	445583.0000
4-APR-2006 09:57 count	439292.0000
3-APR-2006 06:42 count	442611.0000
31-MAR-2006 06:25 count	434745.0000
30-MAR-2006 08:16 count	433546.0000 In
29-MAR-2006 08:06 count	438277.0000
28-MAR-2006 06:43 count	442726.0000
27-MAR-2006 05:58 count	446933.0000
24-MAR-2006 06:47 count	434819.0000
23-MAR-2006 09:54 count	437576.0000
23-MAR-2006 09:43 count	437437.0000
23-MAR-2006 09:29 count	439538.0000
file:///P /Transfer/qa1_asc5_26-may-2006-11360486	b.txt

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
11-APR-2006 06:21	count	440359.00	00	
12-APR-2006 09:28	count	443062.00	00	I .

Generated 26-MAY-2006 11:36:04.64

QA Filename : \$DISK1:[SCINT5.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-5

Parameter Units : counts Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : ----- End Date : -----

Mean : 4214.022949 Std Deviation : 40020.859375

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 08:36 count 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:36:09.43

QA Filename : \$DISK1:[SCINT8.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-8

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 365942.000000 Upper Bound : 434690.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 400316.312500 Std Deviation : 11458.545898

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 11:46 count 401151.0000 399476.0000 3-MAR-2006 09:57 count 6-MAR-2006 09:58 count 406439.0000 7-MAR-2006 11:07 count 391101.0000 8-MAR-2006 11:18 count 413158.0000 420639.0000 13-MAR-2006 07:54 count 14-MAR-2006 10:48 count 409462.0000 15-MAR-2006 08:07 count 406835.0000 16-MAR-2006 07:30 count 404978.0000 17-MAR-2006 09:03 count 393785.0000 20-MAR-2006 06:55 count 390713.0000 394203.0000 21-MAR-2006 09:35 count 22-MAR-2006 07:43 count 401596.0000 23-MAR-2006 08:49 count 401755.0000 24-MAR-2006 07:48 count 408042.0000 27-MAR-2006 06:37 count 390599,0000 28-MAR-2006 07:43 count 397912.0000 425414.0000 29-MAR-2006 09:27 count |In| 30-MAR-2006 09:02 count 409187.0000 31-MAR-2006 07:51 count 398289.0000 3-APR-2006 08:19 count 396655.0000

4-APR-2006 11:10 count	396349.0000	
5-APR-2006 07:34 count	413296.0000	
6-APR-2006 09:17 count	405341.0000	
7-APR-2006 06:25 count	412076.0000	
8-APR-2006 11:14 count	395122.0000	
10-APR-2006 06:40 count	408699.0000	
11-APR-2006 06:48 count	410348.0000	
12-APR-2006 08:52 count	391732.0000	

Generated 26-MAY-2006 11:36:09.84

QA Filename : \$DISK1:[SCINT8.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description

: 1000 min bkg, ascint-8

Parameter Units: counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Value LU|SD|UD|BS Rej

Mean

: 0.000000

Std Deviation: 0.000000

Measurement Time Sample ID Sample Analyst 31-MAR-2006 12:33 count

0.0000 + | + |

Generated 26-MAY-2006 11:36:14.33

QA Filename

: \$DISK1:[SCINT9.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-9

Parameter Units: counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 248138.000000

Upper Bound : 272733.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 260434.531250 Std Deviation: 4099.330566

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 08:51		258755.0	 000	
1-MAR-2006 08:51 6-MAR-2006 07:57	count	256995.0		
7-MAR-2006 07:53		255163.0	!!	1
•			' '	1
8-MAR-2006 09:21		256865.0	' '	
9-MAR-2006 08:14		258213.0		
13-MAR-2006 07:42	count	261030.0	0000	
14-MAR-2006 07:42	count	257230.0	0000	
15-MAR-2006 07:17	count	262919.0	0000	
16-MAR-2006 06:30	count	254480.0	0000	
17-MAR-2006 07:07	count	260172.0	0000	İ
20-MAR-2006 06:43	count	262037.0	0000	
21-MAR-2006 09:35	count	260131.0	0000	
22-MAR-2006 08:15	count	261884.0	0000	
23-MAR-2006 07:52	count	256064.0	0000	
24-MAR-2006 07:26	count	262867.0	0000	
27-MAR-2006 06:25	count	261178.0	0000	
28-MAR-2006 07:28	count	264126.0	0000	
29-MAR-2006 08:58	count	264331.0	0000	
30-MAR-2006 08:35	count	266029.0	0000	
31-MAR-2006 07:51	count	256078.0	0000	
3-APR-2006 07:26	count	259417.00	000	

4-APR-2006 10:44 count 259204.0000	
5-APR-2006 07:34 count 266057.0000	
6-APR-2006 08:28 count 257181.0000	
7-APR-2006 06:25 count 262996.0000	
8-APR-2006 09:34 count 262763.0000	
10-APR-2006 06:17 count 264783.0000	
11-APR-2006 06:48 count 264018.0000	
12-APR-2006 09:39 count 263161.0000	

Generated 26-MAY-2006 11:36:14.72

QA Filename : \$DISK1:[SCINT9.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-9

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Std Deviation: 0.000000 : 0.000000 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 12:33 count 0.0000 + | + |

Generated 26-MAY-2006 11:34:36.19

QA Filename

: \$DISK1:[SCINT11.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-11

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 248368.000000

Upper Bound : 276936.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 21-SEP-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 262651.750000

Std Deviation: 4761.245117

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 11:15	count	262734.00	00	
2-MAR-2006 14:42		265688.00	, ,	
6-MAR-2006 08:31	count	266241.00	00	İ
7-MAR-2006 11:07	count	266875.00	00	
8-MAR-2006 11:07	count	265770.00	00	
13-MAR-2006 08:06	count	264258.00	000	
14-MAR-2006 09:16	count	266875.00	000	
15-MAR-2006 07:57	count	265650.00	000	
16-MAR-2006 07:02	count	265616.00	000	
17-MAR-2006 07:36	count	266882.00	000	
20-MAR-2006 07:17	count	267126.00	000	
21-MAR-2006 10:00	count	268220.00	000	
22-MAR-2006 08:54	count	264963.00	000	
23-MAR-2006 08:49	count	265270.00	000	
24-MAR-2006 08:01	count	267439.00	000	
27-MAR-2006 06:48	count	264963.00	000	
28-MAR-2006 08:22	count	267092.00	000	
29-MAR-2006 09:27	count	266531.00	000	
30-MAR-2006 09:02	count	266559.00	000	
31-MAR-2006 08:16	count	265904.00	000	
3-APR-2006 08:43	count	269003.000	0	

4-APR-2006 11:36 count	266771.0000
5-APR-2006 08:01 count	269180.0000
6-APR-2006 09:59 count	266373.0000
7-APR-2006 07:03 count	266730.0000
10-APR-2006 07:19 count	267101.0000
11-APR-2006 08:09 count	266969.0000
12-APR-2006 10:34 count	266712.0000

Generated 26-MAY-2006 11:34:36.59

QA Filename : \$DISK1:[SCINT11.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description

: 1000 min bkg, ascint-11

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Action Level: 3.000000 Investigate Level: 2.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean

: 0.250000

Std Deviation: 0.462910

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 31-MAR-2006 08:36 count

Generated 26-MAY-2006 11:34:42.94

QA Filename

: \$DISK1:[SCINT12.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-12

Parameter Units: counts

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 265813.000000

Upper Bound : 278509.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 18-AUG-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 272160.875000

Std Deviation: 2116.000244

Measurement Time	Sample ID	Sample Analyst V	alue	LU SD UD BS Rej
1-MAR-2006 10:39	count	275211.0000)	
6-MAR-2006 08:54	count	275742.000)	- Providence
7-MAR-2006 11:24	count	276449.000) In	
8-MAR-2006 11:18	count	276495.000) In	
13-MAR-2006 08:19	count	274920.000	$0 \mid \mid$	
14-MAR-2006 09:45	count	276719.000	0 Ir	n
15-MAR-2006 08:08	count	276805.000	0 Ir	ո
16-MAR-2006 07:16	count	277085.000	0 Ir	n
17-MAR-2006 07:52	count	277668.000	0 Ir	n
20-MAR-2006 07:28	count	276824.000	0 Ir	n
21-MAR-2006 10:12	count	276979.000	0 Ir	n
22-MAR-2006 09:08	3 count	276427.000	0 Ir	n
23-MAR-2006 09:11	count	274474.000	0	
24-MAR-2006 08:43	count	278089.000	0 Ir	ı
27-MAR-2006 07:12	2 count	275396.000	$0 \mid \mid$	
28-MAR-2006 08:49	count	277597.000	0 Ir	n
29-MAR-2006 09:42	eount ?	276512.000	0 $ Ir$	ո
30-MAR-2006 09:13	count	276389.000	0	
31-MAR-2006 08:30	count	276546.000	0 Ir	ո
3-APR-2006 08:59	count	277593.0000	In	
4-APR-2006 11:49	count	278018.0000	$ \ln $	

5-APR-2006 07:48 count	280700.0000 Ab Ac
5-APR-2006 08:19 count	279075.0000 Ab Ac
6-APR-2006 09:17 count	276137.0000
7-APR-2006 07:15 count	275703.0000
8-APR-2006 12:30 count	277476.0000 In
10-APR-2006 07:40 count	277823.0000 In]
11-APR-2006 08:32 count	279677.0000 Ab Ac
11-APR-2006 09:08 count	279893.0000 Ab Ac
12-APR-2006 10:57 count	276638.0000 In

Generated 26-MAY-2006 11:34:43.39

QA Filename : \$DISK1:[SCINT12.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description

: 1000 min bkg, ascint-12

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Investigate Level: 2.000000

Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean

: 0.428571

Std Deviation: 0.534522

Measurement Time Sample ID Sample Analyst

Value LU|SD|UD|BS Rej

31-MAR-2006 09:36 count

0.0000 + | + |

Generated 26-MAY-2006 11:34:49.47

QA Filename

: \$DISK1:[SCINT13.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-13

Parameter Units: counts

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 19307.000000

Upper Bound : 22445.099609

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

Mean

: 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

: 20876.917969 Std Deviation : 523.029602

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 08:51 count 20228.0000 2-MAR-2006 14:29 count 20114.0000 3-MAR-2006 09:13 count 20193.0000 6-MAR-2006 07:57 count 19672.0000 In 7-MAR-2006 10:12 count 19982.0000 8-MAR-2006 08:31 count 19920.0000 9-MAR-2006 08:14 count 19983.0000 13-MAR-2006 06:43 count 19912.0000

20163.0000 14-MAR-2006 07:42 count 15-MAR-2006 06:21 count 19905.0000 19775.0000 16-MAR-2006 06:31 count |In| 20-MAR-2006 06:03 count 20265.0000 21-MAR-2006 08:29 count 19977.0000

22-MAR-2006 07:10 count 18914.0000 Be|Ac| | 22-MAR-2006 07:23 count 19748.0000

In 20273.0000 23-MAR-2006 06:16 count

24-MAR-2006 06:28 count 20121.0000 26-MAR-2006 07:28 count 20141.0000

27-MAR-2006 05:43 count 19782.0000 |In| 28-MAR-2006 06:26 count 20125.0000

19811.0000 29-MAR-2006 06:13 count |In|

30-MAR-2006 06:32 count	20023.0000
31-MAR-2006 06:05 count	20140.0000
5-APR-2006 06:43 count	20162.0000
6-APR-2006 06:32 count	19996.0000
7-APR-2006 05:32 count	19910.0000
8-APR-2006 09:01 count	20118.0000
10-APR-2006 05:29 count	20236.0000
11-APR-2006 06:06 count	20004.0000
12-APR-2006 08:52 count	20199.0000

Quality Assurance Report. Generated 26-MAY-2006 11:34:49.92

QA Filename : \$DISK1:[SCINT13.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-13

Parameter Units : counts Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

 31-MAR-2006 09:36 count
 11.0000 | | |

 3-APR-2006 06:09 count
 61.0000 | | |

 4-APR-2006 11:10 count
 4.0000 | | |

Generated 26-MAY-2006 11:34:55.53

QA Filename

: \$DISK1:[SCINT14.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-14

Parameter Units : counts

Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 434740.000000

Upper Bound : 480933.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 1-OCT-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 457837.062500

Std Deviation: 7698.662109

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 08:51	count	464586.0	0000	
6-MAR-2006 07:57		454489.0	0000	
7-MAR-2006 07:53	count	484007.0	000 Ab	Ac
7-MAR-2006 11:24	count	449323.0	0000	
8-MAR-2006 11:31	count	450275.0	0000	
13-MAR-2006 09:40	count	446835.0	0000	
14-MAR-2006 07:42	count	472729.0	0000	
15-MAR-2006 08:19	count	448007.0	0000	
16-MAR-2006 06:31	count	449592.0	0000	
17-MAR-2006 07:07	count	466504.0	0000	
20-MAR-2006 07:07	count	454378.0	0000	
21-MAR-2006 09:47	count	465749.0	0000	
22-MAR-2006 08:15	count	457584.0	0000	
23-MAR-2006 07:52	count	462930.0	0000	
24-MAR-2006 08:01	count	458624.0	0000	
27-MAR-2006 06:48	count	451039.0	0000	
28-MAR-2006 08:22	2 count	462580.	0000	
29-MAR-2006 09:42	2 count	463987.0	0000	
30-MAR-2006 07:32	2 count	462071.	0000	
31-MAR-2006 06:38	count	454721.	0000	
3-APR-2006 07:26	count	462513.00	000	

4-APR-2006 10:44 count	444667.0000
5-APR-2006 08:01 count	460310.0000
6-APR-2006 09:31 count	454937.0000
7-APR-2006 06:45 count	460447.0000
8-APR-2006 11:29 count	458831.0000
10-APR-2006 07:08 count	461061.0000
11-APR-2006 08:09 count	459512.0000
12-APR-2006 10:00 count	458685.0000

Generated 26-MAY-2006 11:34:55.93

QA Filename : \$DISK1:[SCINT14.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-14

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 5.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.000000 Std Deviation : 0.000000

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 12:33 count 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:35:01.63

QA Filename : \$DISK1:[SCINT16.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-16

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 79969.000000 Upper Bound : 84025.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 81997.304688 Std Deviation : 676.010071

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 08:49	count	81861.000	0	-
3-MAR-2006 09:13	count	81343.000	0	
4-MAR-2006 10:44	count	81870.000	0	
6-MAR-2006 08:18	count	81555.000	0	
7-MAR-2006 10:11	count	81245.000	0	
8-MAR-2006 09:21	count	81351.000	0	
9-MAR-2006 08:31	count	81033.000	0	
13-MAR-2006 07:00	count	82520.000	00	
14-MAR-2006 07:56	count	81579.000	00	
15-MAR-2006 06:37	count	81399.000	00	
16-MAR-2006 07:02	count	80887.000	00	
17-MAR-2006 07:10	count	81089.000	00	
20-MAR-2006 06:19	count	81299.000	00	
21-MAR-2006 08:51	count	81594.000	00	
22-MAR-2006 07:32	count	81500.000	00	
23-MAR-2006 06:33	count	81985.000	00	
24-MAR-2006 06:47	count	82134.000	00	Ì
27-MAR-2006 05:58	count	81364.000	00	İ
28-MAR-2006 06:43	count	81484.000	00	Ì
29-MAR-2006 09:42	count	81702.000	00 i i	İ
30-MAR-2006 08:49	count	81485.000	00 i i	İ

31-MAR-2006 06:18 count	82074.0000	
3-APR-2006 07:25 count	80797.0000	
4-APR-2006 08:25 count	82275.0000	
5-APR-2006 07:22 count	80934.0000	
6-APR-2006 08:36 count	82573.0000	
7-APR-2006 05:51 count	81484.0000	
8-APR-2006 09:22 count	80929.0000	
10-APR-2006 05:42 count	81223.0000	
11-APR-2006 06:21 count	81558.0000	
12-APR-2006 09:15 count	81205.0000	

Generated 26-MAY-2006 11:35:02.26

QA Filename : \$DISK1:[SCINT16.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-16

Parameter Units : counts Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 2.250000 Std Deviation : 1.035098

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 08:35 count 4.0000 | | |

Generated 26-MAY-2006 11:35:06.77

QA Filename : \$DISK1:[SCINT18.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description

: 10 min check, ascint-18

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 78167.000000

Upper Bound : 81716.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Mean

: 21-SEP-2005 00:00 End Date : 1-JAN-2006 00:00

: 79943.148438

Std Deviation : 591.893616

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 11:44	count	79944.000	0	
2-MAR-2006 14:54	count	79805.000	0	
3-MAR-2006 09:38	count	79408.000	0	
6-MAR-2006 09:28	count	79391.000	0	
7-MAR-2006 10:34	count	79306.000	0	
8-MAR-2006 11:07	count	79873.000	0	
13-MAR-2006 07:31	count	80460.000	00	
14-MAR-2006 08:56	count	80045.000	00	
15-MAR-2006 07:17	count	79405.000	00	
16-MAR-2006 07:30	count	79497.000	00	
17-MAR-2006 07:36	count	79623.000	00	
20-MAR-2006 06:42	count	79252.000	00	
21-MAR-2006 09:35	count	79432.000	00	
22-MAR-2006 08:15	count	79538.000	00	
23-MAR-2006 07:01	count	79761.000	00	
24-MAR-2006 07:25	count	79309.000	00	
27-MAR-2006 06:25	count	78805.000	00	
28-MAR-2006 07:28	count	79163.000	00	
29-MAR-2006 09:12	count	79495.000	00	
30-MAR-2006 08:16	count	78959.000	00	

79504.0000 | | |

31-MAR-2006 06:43 count

3-APR-2006 07:47	count	78411.0000	In
4-APR-2006 10:44	count	79492.0000	
5-APR-2006 07:48	count	78653.0000	In
6-APR-2006 09:31	count	80093.0000	
7-APR-2006 06:25	count	78724.0000	In
8-APR-2006 09:36	count	79057.0000	
10-APR-2006 06:11	count	78739.0000	In
11-APR-2006 06:48	count	79228.0000	
12-APR-2006 09:40	count	79172.0000	

Generated 26-MAY-2006 11:35:07.15

QA Filename

: \$DISK1:[SCINT18.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description

: 1000 min bkg, ascint-18

Parameter Units : counts

Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000

Upper Bound : 5.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUN-2005 00:00 End Date

: 1-JAN-2006 00:00

Mean

: 0.428571

Std Deviation: 0.786796

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 31-MAR-2006 08:35 count

Quality Assurance Report. Generated 26-MAY-2006 11:35:13.56

QA Filename : \$DISK1:[SCINT19.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-19

Parameter Units: counts Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 16907.000000 Upper Bound : 18329.800781

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : ----- End Date : -----

Mean : 17784.054688 Std Deviation : 1083.267700

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 08:51 count 18161.0000 3-MAR-2006 09:13 count 0.0000 Be|Ac| | R 18058.0000 3-MAR-2006 09:37 count 17652.0000 4-MAR-2006 10:44 count 6-MAR-2006 07:57 count 17755.0000 7-MAR-2006 07:53 count 18035.0000 8-MAR-2006 08:31 count 17865.0000 9-MAR-2006 08:14 count 17982.0000 13-MAR-2006 06:43 count 17886.0000 14-MAR-2006 08:06 count 18247.0000 15-MAR-2006 06:22 count 18067.0000 16-MAR-2006 06:31 count 18080.0000 17-MAR-2006 07:07 count 18015.0000 20-MAR-2006 06:03 count 17836.0000 21-MAR-2006 08:29 count 17918.0000 22-MAR-2006 06:05 count 18168.0000 23-MAR-2006 06:16 count 18430.0000 Ab | 23-MAR-2006 06:31 count 17990.0000 24-MAR-2006 06:28 count 18220.0000 26-MAR-2006 07:28 count 18147.0000 27-MAR-2006 05:43 count 17729.0000

28-MAR-2006 06:26 count	17981.0000
29-MAR-2006 06:13 count	17975.0000
30-MAR-2006 06:32 count	18063.0000
31-MAR-2006 06:05 count	17918.0000
3-APR-2006 06:28 count	17816.0000
4-APR-2006 07:04 count	17988.0000
5-APR-2006 06:43 count	18003.0000
6-APR-2006 06:32 count	17942.0000
7-APR-2006 05:32 count	18227.0000
8-APR-2006 09:01 count	18120.0000
10-APR-2006 05:30 count	17911.0000
11-APR-2006 06:21 count	17827.0000
12-APR-2006 08:52 count	18232.0000

Quality Assurance Report. Generated 26-MAY-2006 11:35:14.08

QA Filename : \$DISK1:[SCINT19.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-19

Parameter Units : counts Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 5.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : ----- End Date : ----- Mean : 0.560976 Std Deviation : 1.285472

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 12:33 count 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:35:18.97

QA Filename : \$DISK1:[SCINT20.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-20

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 77795.000000 Upper Bound : 82120.000000

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 10:39	count	79377.000 79369.000 79539.000	0	·
2-MAR-2006 13:43	count	79369.000	0	
6-MAR-2006 08:54	count	79539.000	0	
7-MAR-2006 10:55	count	79786.000	0	
8-MAR-2006 11:18	count	79482.000	0 + +	
13-MAR-2006 07:42	count	79358.000	00	
14-MAR-2006 09:18	count	79260.000	00	
15-MAR-2006 07:43	count	79428.000	00	
16-MAR-2006 07:42	count	79780.000	00	
17-MAR-2006 07:52	count	79369.000	00	
20-MAR-2006 07:38	count	79622.000	00	
21-MAR-2006 09:47	count	79705.000	00	
22-MAR-2006 06:05	count	79203.000	00	
23-MAR-2006 07:52	count	79417.000	00	
24-MAR-2006 07:59	count	79674.000	00	
27-MAR-2006 06:37	count	78960.000	00	
28-MAR-2006 07:43	count	79881.000	00	
29-MAR-2006 08:07	count	78375.000	00	
30-MAR-2006 07:32	count	79352.000	00	
31-MAR-2006 07:08	count	79377.000	00	
3-APR-2006 06:51	count	78848.0000		
4-APR-2006 11:10	count	79534.0000)	
5-APR-2006 08:01	count	78460.0000)	
6-APR-2006 09:45	count	79778.0000)	
7-APR-2006 06:44	count	79084.0000)	
8-APR-2006 10:54	count	79117.0000)	
10-APR-2006 07:45	count	78926.000	0	

Measurement Time Sample ID

79110.0000 11-APR-2006 07:02 count 79191.0000 12-APR-2006 10:00 count Generated 26-MAY-2006 11:35:19.29 Quality Assurance Report. OA Filename : \$DISK1:[SCINT20.QA]BKG.QAF;1 -- Multi-Test Full Report --Description : 1000 min bkg, ascint-20 Parameter Type: Manual Parameter Units: counts ---- Lower/Upper Bounds Test Parameters ----Upper Bound : 5.000000 : 0.000000 Lower Bound Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00 Std Deviation: 0.000000 : 0.000000 Mean

Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Report. Generated 26-MAY-2006 11:35:25.29

QA Filename : \$DISK1:[SCINT23.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-23

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 79018.500000 Upper Bound : 83000.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 21-OCT-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 80966.593750 Std Deviation : 560.867310

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 11:30	 count	80428.000	 0	
2-MAR-2006 14:42		80631.000	1 1 1	
6-MAR-2006 07:57		79952.000		
7-MAR-2006 07:53		80214.000	0	
8-MAR-2006 08:31		80478.000	0	
9-MAR-2006 08:14	count	79842.000	0 $ In $	
13-MAR-2006 06:44	count	80669.000	00	·
14-MAR-2006 07:42	count	80412.000	00	[
15-MAR-2006 06:22	count	80708.000	00	
16-MAR-2006 06:31	count	0.0000	Be Ac	R
16-MAR-2006 06:44	count	80277.000	00	
16-MAR-2006 07:42	count	3.0000	Be Ac	R
17-MAR-2006 06:57	count	80354.000	00	
20-MAR-2006 06:03	count	80114.000	00	
21-MAR-2006 08:29	count	80586.000	00	
22-MAR-2006 07:17	count	80490.000	00	
23-MAR-2006 06:16	count	80628.000	00	
24-MAR-2006 06:28	count	81164.000	00	
26-MAR-2006 07:33	count	80378.000	00	
27-MAR-2006 05:43	count	79837.000	00 In	
28-MAR-2006 06:26	count	80190.000	00	

29-MAR-2006 06:13 count	80658.0000
30-MAR-2006 06:32 count	80799.0000
31-MAR-2006 06:05 count	80051.0000
3-APR-2006 06:28 count	80091.0000
4-APR-2006 07:04 count	79957.0000
5-APR-2006 06:43 count	79220.0000 Ac
5-APR-2006 06:56 count	78843.0000 Be Ac
6-APR-2006 06:32 count	80390.0000
7-APR-2006 05:32 count	79762.0000 In
8-APR-2006 09:01 count	79957.0000
10-APR-2006 05:29 count	79904.0000 🗸
11-APR-2006 06:06 count	79643.0000 In
12-APR-2006 08:52 count	80137.0000

Quality Assurance Report. Generated 26-MAY-2006 11:35:25.68

QA Filename : \$DISK1:[SCINT23.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-23

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 5.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 4.428571 Std Deviation : 3.631365

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 08:35 count 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:35:31.37

QA Filename : \$DISK1:[SCINT24.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : 10 min check, ascint-24

Parameter Units : counts Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 45515.000000 Upper Bound : 48435.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-SEP-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 45858.765625 Std Deviation : 378.449982

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 08:51	count	45856.000	 D	
2-MAR-2006 14:29	count	45857.0000)	
3-MAR-2006 09:13	count	45827.000)	
6-MAR-2006 07:57	count	45652.0000)	
7-MAR-2006 07:53	count	45709.000)	
8-MAR-2006 08:31	count	45946.000)	
9-MAR-2006 08:14	count	45805.000)	
13-MAR-2006 06:43	count	45961.000	0	
14-MAR-2006 07:42	count	45898.000	$0 \mid \mid$	
15-MAR-2006 06:22	count	45696.000	$0 \mid \mid$	
16-MAR-2006 06:31	count	45822.000	$0 \mid \mid$	[
17-MAR-2006 06:57	count	46233.000	$0 \mid \mid$	
20-MAR-2006 06:03	count	46210.000	$0 \mid \mid$	
21-MAR-2006 08:29	count	45395.000	0 Be	
21-MAR-2006 08:43	count	45583.000	0	
22-MAR-2006 06:05	count	45771.000	0	
23-MAR-2006 06:16	count	46365.000	0	
24-MAR-2006 06:28	count	45611.000	0	
26-MAR-2006 07:28	count	45924.000	0	
27-MAR-2006 05:43	count	45877.000	0	
28-MAR-2006 06:26	count	46164.000	0	

29-MAR-2006 06:13 count	45901.0000
30-MAR-2006 06:32 count	46101.0000
31-MAR-2006 06:05 count	46607.0000
3-APR-2006 06:28 count	45857.0000
4-APR-2006 07:04 count	46505.0000
5-APR-2006 06:43 count	46421.0000
6-APR-2006 06:32 count	46119.0000
7-APR-2006 05:32 count	46076.0000
8-APR-2006 09:01 count	45694.0000
10-APR-2006 05:30 count	45712.0000
11-APR-2006 06:06 count	45997.0000
12-APR-2006 08:52 count	45520.0000

Quality Assurance Report. Generated 26-MAY-2006 11:35:31.75

QA Filename : \$DISK1:[SCINT24.QA]BKG.QAF;1

-- Multi-Test Full Report --

Description : 1000 min bkg, ascint-24

Parameter Units: counts Parameter Type: Manual

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUN-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.142857 Std Deviation : 0.377964

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

31-MAR-2006 08:35 count 0.0000 | | |

RADIUM 228 SAMPLE AND QC DATA

SEVERN	CTT
	DIL

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

4/12/2006 3:54:43 PM

Lot No., Due Date:

J6B270158: 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6060344; RRA228 Ra-228 by GPC

SDG, Matrix:

31025; FILTER

1.0 COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

es No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

es No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

es No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A Yes No N/A

4.2 Were analysis volumes entered correctly?

Yeş No N/A

4.3 Were Yields entered correctly?

Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

5.0 Other5.1 Are all nonconformances included and noted?

5.2 Are all required forms filled out?

Yes No N/A Yes No N/A

5.3 Was the correct methodology used?

es No N/A

5.4 Was transcription checked?

5.6 Are worksheet entries complete and correct?

No N/A

5.5 Were all calculations checked at a minimum frequency?

No N/A

6.0 Comments on any No response:

First Level Review

Pan Duderson

Date 4-12-06

...

Page 1



Data Review Checklist RADIOCHEMISTRY Second Level Review

	6060344
OC Batch Number:	9090571

A. Sample Analysis 1. Are the sample yields within acceptance criteria? 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria? 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria? 9. Do the duplicate sample results and yields meet acceptance criteria? C. Other 1. Are all Nonconformances included and noted? 2. Are all required forms filled out? 3. Was the correct methodology used?	Are the sample yields within acceptance criteria? Is the sample Minimum Detectable Activity < the Contract section Limit? It the correct isotopes reported? It is the Minimum Detectable Activity for the blank result < the streat Detection Limit? It is the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample stated the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity < the Contract Detection sit? In the MS/MSD results and yields meet acceptance criteria? In the duplicate sample results and yields meet acceptance criteria? On the duplicate sample results and yields meet acceptance criteria? On the duplicate sample results and noted? Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency?	Are the sample yields within acceptance criteria? Is the sample Minimum Detectable Activity < the Contract betection Limit? Are the correct isotopes reported? QC Samples Is the Minimum Detectable Activity for the blank result ≤ the contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample esult < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? Do the duplicate sample results and yields meet acceptance criteria? COther Are all Nonconformances included and noted? Are all required forms filled out?	Are the sample yields within acceptance criteria? Is the sample Minimum Detectable Activity < the Contract etection Limit? Are the correct isotopes reported? QC Samples Is the Minimum Detectable Activity for the blank result < the ontract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample esult < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity < the Contract Detection imit? Do the MS/MSD results and yields meet acceptance criteria? Do the duplicate sample results and yields meet acceptance criteria? Other Are all Nonconformances included and noted? Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency?			
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		Second Level Review. Therryl a alam Date: 4-12	Second Level Review Messel a Clan	· ·	Date:	4-13

3/31/2006 10:49:52 AM 536403, Brown and Caldwell Caldwell Report Due: 03/31/2006	, Brown &	TF Radiu	Sample Prepa 6/228 PrpRC5016, 9 m-228 by GPC DARD TEST SET		alysis		Pip	et #: ech: 40 4/	
Batch: 6060344 FILTER SEQ Batch, Test: 6060342, BXTE	pCi/sam _l			ıote: EJ , 63	174	·		ech:[] - [] - [] [
			1 (0)(10)	 				ech: HansenM,Ha	
Work Order, Lot, Total Amt Sample Date /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HX81N-1-AD 0.833sa J6B270158-1-SAMP	503.56sa	151.80g,in	0.2511g	RATA21346 03/29/06	11 30	3 3X5	0 1A	1555	1/11/an
	Ba-13	3	1,0.993	4				o639 L	1/12/06 n
	Ba-ve verove (see V	a-226 she	d)	••••			***************************************		
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2 HX81Q-1-AD 0.833sa J6B270158-2-SAMP	501.73sa	150.71g,in	0.2502g	RATA21347 03/31/06	29,	1	13	1555 41	hilaes
			0,9123				75	0639	1206 m
02/05/2006 06:35	åmt 🖸 c	ec: FOLDER	#Containers: 1	******************					
3 HX81R-1-AD 0.833sa	500.94sa	150.82g,in	0.2508g	RATA21348		Sicr:	Alpha:		Beta:
J6B270158-3-SAMP				03/31/06	30	.3	74	1555 4/1	1/Nes
	·		1.1514	······································			<u> </u>	0639 4	
02/05/2006 07:15	AmtRe	c: FOLDER	#Containers: 1	***************************************		Ser:	Alpha:	·····	Beta:
4 HX81T-1-AD 0.833sa J6B270158-4-SAMP	508.67sa	150.38g,in	0.2463g	RATA21349 03/31/06	29	16	IA	1555 V/	1
11: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			0.9798				14	0639	4 12/06 1
02/05/2006 07:45	AmtRe	c: FOLDER	#Containers: 1	\	1/		Alpha:	***************************************	Beta:
STL Richland Key: In - Initial	AmtRe Amt, fi - Final Amt, di - Dt, r - Reference Dt, ec-E	Diluted Amt, s1	- Sep1, s2 - Sep2	Page 1	ISV - Ins	sufficient Volume			Beta:

SEQ Batch, Test: 606034 Work Order, Lot, T Sample Date	FILTER 42, BXTE Total Amt Total Acidifi //Unit Acidifi .833sa 501.14	tal ed/Unit		Adj Aliq Amt (Un-Acidified)	uote: EJ , 63			Sep1 DT/Tm Te Sep2 DT/Tm Te Prep Te		
Work Order, Lot, Sample Date 5 HX81V-1-AD J6B270158-5-SAMP	Fotal Amt To Acidifi 833sa 501.14	tal ed/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer		 	•		
5 HX81V-1-AD 0.6 J6B270158-5-SAMP	/Unit Acidifi 833sa 501.14	ed/Unit	Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer		611 6161 1861	Prep le	rh. Hanessii Uss	
5 HX81V-1-AD 0.6 J6B270158-5-SAMP	/Unit Acidifi 833sa 501.14	ed/Unit	Amt/Unit	(Un-Acidified)			_الاناساني		zii. Hanəciliyi,flaa	ckS
J6B270158-5-SAMP		sa	151.30g,in	0.0545	Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
	## 			0.2515g	RATA21350 03/31/06	1117	30.9 3	450 IC	1555 411	In lan
				1.0814	1			1 1		4/12/06.
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02/05/2006 08:15		AmtRe	ec: FOLDER	#Containers: 1			Ser:	Aipha:		Beta:
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7 HX81X-1-AD 0.8 J6B270158-7-SAMP	833sa 500.96	sa	150.62g,in	0.2505g	RATA21352 03/31/06	30.	. 8	21	1555 4/1	
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02/05/2006 06:10 8 HX811-1-AD 0.8	833sa 501.8		150 10a in	#Containers: 1	DATAMAGA		Scr:	Alpha:	<u>-</u>	Beta:
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				1.0578) h		112/06
			***************************************		\	<u></u> .			·	11.10
02/05/2006 06:15		AmtRe	c: FOLDER	#Containers: 1	\bigvee	/	Scr:V	Alpha:	***************************************	Beta:
STL Richland Key:	: In - Initial Amt, fi - Fir	al Amt, di-	Diluted Amt. s1	- Sep1, s2 - Sep2	Page 2	ISV - Ir				

3/31/2006 10:49: 536403, Brown al Caldwell Report Due: 03/	53 AM nd Caldwell 31/2006	, Brown &	TF Radiu	Sample Prep 6/228 PrpRC5016, m-228 by GPC DARD TEST SET		llysis			et #:	2,1120373922,1120
Batch: 6060344	FILTER	pCi/san	npl	PM, Q	uote: EJ , 631	74		Sep2 DT/Tm Te		
SEQ Batch, Test: 60	960342, BX1E			1 188818	riffi marin ariii				ch: HansenM,I	HaackS
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
9 HX812-1-AD J6B270158-9-SAMP		507.36sa	151.06g,in	0.248g	RATA21354 03/31/06	lin o	21.0 2	<u> </u>	П	Ylulu.
				0.93	73			3x50 2c 2c	0639	4/12/060
02/05/2006 06:05			Rec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
10HX813-1-AD J6B270158-10-SAMI		500.90sa	150.63g,in	0.2505g	RATA21355 03/31/06	3	c .8	20	1555	YInlow
	 	••••••••••••••••••••••••••••••••••••••		0.985	4			Źd	0439	4/12/06 x
02/05/2006 06:40			Rec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
11 HX814-1-AD J6B270158-11-SAM		502.44sa	150.65g,in	0.2498g	RATA21356 03/31/06	24	5.1	3 <i>A</i>	1555	4/11/62
				101111			-	<u>3</u> b	0639	4/12/062
02/05/2006 07:20			Rec: FOLDER	#Containers: 1			S¢r:	Alpha:	*	Beta;
12HX815-1-AD J6B270158-12-SAMF	2011 A 48 1 M 148 MM.	501.00sa	151.27g,in	0.2515g	RATA21357 03/31/06	27	.3	36	1555	4/11/des
111 0 11 0 11 0 11 0 1 1 1 1 1 1 1 1 1				1 0386				3c	0639	4/12/06 =
02/05/2006 07:50		AmtF	Rec: FOLDER	#Containers: 1	1/		Scr:	Alpha:		Beta:
STL Richland	Kev: In - Initial Am	nt, fi - Final Amt, d	i - Diluted Amt of	- Sont of Sont	Page 3	1011				
Richland Wa.				ct-Cocktailed Added	, ago o	134 - 111	sufficient Volum	e iui Anaiysis	5	WO Cnt: 12

Report Due: 03/31/2006 STANDARD TEST SET Sapt DT/Tm Tech:	3/31/2006 10:49:53 AM 536403, Brown and Caldwell	, Brown &	BX Ra-22	Sample Prep		llysis				120373922,1120
Separation Sep	Caldwell Candwell Candwell Candwell		TF Radio	m-228 by GPC	, оернозооз					
Total Amt		DCi/eam			·			Sep1 DT/Tm Tec	:h:	
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Sample Date Aunt		11 - 1						Prep Tec	:h: HansenM,Ha	ackS
1948/81-1-AD								Count On Off (24hr) Circle		Comments:
C2/05/2006 08:20	J6B270158-13-SAMP	505.04sa	150.54g,in	0 .2483g		ber	30.4 }	BX50 30	1000	4/11/11 ~
O2/05/2006 08:20				1.140	7			7]	1333	1/12/20
14HX817-1-AD				<u>l</u> - <u>V</u>		 		79	0624	4112/06 K
J68270158-14-SAMP			ec: FOLDER	#Containers: 1			Sor:	Alpha:		Beta:
1		501.67sa	150.12g,in	0.2493g		7	.1 /			
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02/05/2006 08:45 AmiRec: FOLDER #Containers: 1 Scr. Alpha: Bela:				0.959	9	********		1 4A	0634	1/12/06 R
15HX818-1-AD						***************************************	·	ļ <u></u>		
15.148761-1-AD		AmtRe	c: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
1.0 4 62		501.09sa	150.95g,in	0.2509g	1	3.	2			
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1.00sa,in 1.00sa RATA21361 30, 4 43 1555 4/1/2067 1.00sa,in 1.00sa RATA21361 30, 4 43 1555 4/1/2067 1.1203 4C C C 3 9 4 12 0 6 7 O2/05/2006 06:00 AmtRec: #Containers: 1 Beta:			*			***************************************		***************************************	**	
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O2/05/2006 06:00 AmtRec: #Containers: 1 Scr. Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 4 ISV - Insufficient Volume for Analysis WO Cnt: 16			······································	1563	03/31/00	05	, 4	9/5	1565 Y	11/00
O2/05/2006 06:00 AmtRec; #Containers: 1 Scr. Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 4 ISV - Insufficient Volume for Analysis WO Cot: 16	11. 4 11 12. 11. 1 12. 1 1 12. 1 4 4 12. 1 11.			1203				4c	0639	4/12/06/
STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 4 ISV - Insufficient Volume for Analysis WO Cnt: 16						•		<i>,</i>		
STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 4 ISV - Insufficient Volume for Analysis WO Cot: 16	02/05/2006 06:00	AmtRed	c; #	Containers: 1	\bigvee		Sco	Alpha:		Reta:
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Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.20					Page 4	ISV - In	sufficient Volum	e for Analysis		VO Cnt; 16

3/31/2006 10	:49:54 AM			S	ample Prepara	tion/Analy	ysis		Balance	ld:11202730	922,1120373922,1120
				BX Ra-226/2: TF Radium-2	28 PrpRC5016, Sep 228 by GPC		•			et #:	
Report Due:					RD TEST SET				Sep1 DT/Tm Te	ech:	
Batch: 60603 SEQ Batch, Tes		рC	ì/sampl						Sep2 DT/⊤m Te	ech:	
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02/05/2006 06:0			اللحد		-t						
Comments:	<u> </u>		AmtRec:	#Cont	ainers: 1			Scr:	Alpha:		Beta:
All Clients fo 536403, B	or Batch: rown and Caldwe	.1		Brown	& Caldwell	. E.	J , 63174				
HX81N1AD-SAMP	Constituent Lis										
Ba-133 RA-228DA HOERC1AA-BLK:	RDL: RDL:3.10E+00	pCi/sam pCi/sam	LCL:70 LCL:	UCL:130 UCL:	RPD:20 RPD:	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:
Ba-133 Ra-228Da HOERC1AC-LCS:	RDL: 3.10E+00	pCi/sam pCi/sam	LCL:70 LCL:	UCL:130	RPD:20 RPD:	RA-228	RDL:3.10E+00	pCi/sam	LCL:	UCL:	RPD:
Ba-133 RA-228	RDL: RDL:1	pCi/sam pCi/sam	LCL:70 LCL:70	UCL:130 UCL:130	RPD:20 RPD:20	Ra-226 RA-228DA	RDL: RDL:1	pCi/sam pCi/sam	_	UCL:130 UCL:130	RPD:20 RPD:20
	Calc Info: evel (#s).: 2	Decay to	SaDt: Y	Blk Subt.	: N Sci.Not.:	Y ODRs:	: B				
IOERC1AA-BLK: Uncert Le IOERC1AC-LCS:	rvel (#s).: 2	Decay to	SaDt: Y	Blk Subt.	: N Sci.Not.:						
	vel (#s).: 2	Decay to	SaDt: Y	Blk Subt.	: N Sci.Not.:	Y ODRs:	: B				
						Approved By	<i>-</i>			Date:	
STL Richland				liluted Amt, s1 - Se		9 5	ISV - Insufficie	nt Volume fo	r Analysis		WO Cnt: 17
Richland Wa.	pd - Prep Dt,	r - Reference	Dt. ec-Eni	richment Cell, ct-Co	scktailed Added				-		Prep_SamplePrep v4.8.2

4/12/2006 3:24:43 PM

ICOC Fraction Transfer/Status Report ByDate: 4/12/2005, 4/17/2006, Batch: '6060344', User: *ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us Ac	cepting		Comments
6060344 AC 6C 6C 6C 6C	CalcC	HansenM wagarr HansenM HansenM HaackS	3/20/2006 4:07 IsBatched InPrep2 Prep2C InPrep	3/1/2006 4:16:24 PM 3/20/2006 4:07:44 PM 3/29/2006 2:05:36 PM 3/31/2006 8:19:10 AM	ICOC_RADCALC v4.8.18 RICH-RC-5016 REVISION 5 RICH-RC-5016 REVISION 4 RICH-RC-5005 REVISION 4
50 50 50 50		HaackS WhitneyT TamosaitisM BlackCL StringerR	Sep1C Sep1C Sep2C InCnt2 CalcC	4/3/2006 1:31:00 PM 4/3/2006 1:32:52 PM 4/11/2006 9:40:55 AM 4/11/2006 1:19:27 PM 4/12/2006 8:34:09 AM	RICH-RC-5005 REVISION 4 RICH-RC-5005 REVISION 4 RICH-RC-5005 REVISION 5 RICH-RD-0003 REVISION 4 RICH-RD-0003 REVISION 4
4 <i>C</i> 4 <i>C</i> 4 <i>C</i>		HansenM HaackS HaackS	3/29/2006 2:05 3/31/2006 8:19 4/3/2006 1:31:0	:10 DO PM	
AC AC AC		WhitneyT TamosaitisM BlackCL	4/3/2006 1:32:5 4/11/2006 9:40 4/11/2006 1:19	:55	
AC		StringerR	4/12/2006 8:34	::09	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.
STL RICHLAND

Page 1

Grp Rec Cnt:8 ICOCFractions v4.8.18

4/12/2006 3:2	24:42 PM		Rpt DB Transfe	er log (Batch	n Res	ults)	967	VERN RENT	STL
SDG or Batch	Rpt Db Id	1	LotSample Client Id Oc Analysis Date Result	Matrix Cnt Lincort	r Recei Tot ungen	ved Date	Sample I Units	Date <u>Expected Yie</u> k	ı Vo	lumes
<u>isotope</u> 31025	9HX811		<u>Qc_Analysis Date Result</u>	AIR	2/27/2	006 8:00:00		6:15:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM 9.9486E-03	1.059E+00	1.059E+00	5.274E+00	PCI/SA	1.0	1.0E+0	2.082E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM 1.5137E+00	1.293E+00	1.298E+00	5.298E+00	PCI/SA	1.0	1.3E+0	3.405E-2
RA-226	BXTE	0	4/10/2006 2:46:00 PM 2.2347E-01	9.499E-02	9.75 7 E-02	2.773E-01	PÇI/SA	1.058	8.33E-1	2.493E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 1.5971E+00	4.447E-01	4.617E-01	1.772E+00	PCI/SA	0.938	1.0E+0	2.493E-1
31025	9HX812	10	J6B2701589 000357	AIR	2/27/2	006 8:00:00	2/5/2006	6:05:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1.0284E+01	2.198E+00	2.444E+00	5.179E+00	PCI/SA	1.0	1.0E+0	≥.07E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM 1.7618E+01	1.728E+00	2.098E+00	5.209E+00	PCI/SA	1.0	1.0 E +0	3.295E-2
FA-226	BXTE	0	4/10/2006 3:21:00 PM -2.3959E-01	1.359E-01	1.382E-01	6.036E-01	PCVSA	0.937	8.33E-1	2.48E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 4.4971E+00	8.231E-01	8.706E-01	2.832E+00	PCI/SA	0.572	1.0E+0	2.48E-1
31025	9HX813	10	J6B27015810 000358	AIR	2/27/2	00:00:8 800:	2/5/2006	6:40:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 4.1731E+00	1.552E+00	1.612E+00	4.862E+00	PCI/SA	1.0	1.0E+0	2.08E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.6272E+01	1.704E+00	2.031E+00	5.341E+00	PCI/SA	1.0	1. 0E+ 0	3.367E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.6862E-01	1.056E-01	1.092E-01	3.078E-01	PCI/\$A	0.985	8.33E-1	2.505 E -1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 1.8241E+00	4.46E-01	4.643E-01	1.638E+00	PCI/SA	0.882	1.0E+0	2.505E-1
31025	9HX814	10	J6B27015811 000359	AIR	2/27/2	00:00:8 600:00	2/5/2006	7:20:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 6.8426E+00	1.932E+00	2.058E+00	5.45E+00	PCI/SA	1.0	1 0E+0	2.079E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.8892E+01	1.608E+00	2.503E+00	4.713E+00	PCI/SA	1.0	1 0E+0	3.318E-2
RA-226	BXTE	0	4/10/2006 3:20:00 PM 3.0838E-01	1,419E-01	1.458E-01	4.564E-01	PCI/SA	1.111	8 33E-1	2.498E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 2.2626E+00	4,868E-01	5.105E-01	1.737E+00	PCI/SA	0.811	1 0E+0	2.498E-1
31025	9HX815	10	J6B27015812 000360	AIR	2/27/2	00:00:8	2/5/2006	7:50:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1.6852E+01	2.628E+00	3.144E+00	5.103E+00	PCI/SA	1.0	1.0E+0	2.093E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 2.5147E+01	1.852E+00	2.52E+00	5.06 E +00	PCI/SA	1.0	1.0E+0	3.357E-2
RA-226	BXTE	0	4/10/2006 3:21:00 PM 5.6304E-01	1.765E-01	1.864E-01	5.117E-01	PCI/SA	1.039	8.33E-1	2.515E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 1.8457E+00	4.531E-01	4.739E-01	1,73E+00	PCI/SA	0.824	1.0E+0	2.515E-1
31025	9HX816	10	J6B27015813 000361	AIR	2/27/2	006 8:00:00	2/5/2006	8:20:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 9.3614E+00	2.111E+00	2.319E+00	4.967E+00	PCI/SA	1.0	1.0E+0	2.09E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 2.4664E+01	1.871E+00	2.53E+00	5.184E+00	PCI/SA	1.0	1.0E+0	3.3E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.0856E+00	2.48E-01	3.317E-01	4.022E-01	PCI/SA	1,141	8.33E-1	2.483E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 2.1678E+01	1.033E+00	1.637E+00	1.489E+00	PCI/SA	1.008	1.0E+0	2.483E-1
31025	9HX817	10	J6B27015814 000362	AIR	2/27/2	006 8:00:00	2/5/2006	8:45:00 AM		
ALPHA	BAS7	0	4/7/2006 11:31:06 AM 1.0892E+01	2.232E+00	2.504E+00	5.119E+00	PCI/SA	1.0	1.0É+0	2.095E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM 2.4118E+01	1.885E+00	2.509E+00	5.291E+00	PCI/SA	1,0	1.0E+0	3.384E-2
RA-226	BXTE	0	4/10/2006 3:19:03 PM 1.1391E-01	1.07E-01	1.077E-01	3.869E-01	PCI/SA	0.96	€.33E-1	2.493E-1
RA-228	BXTF	0	4/12/2006 6:43:34 AM -3.7761E-02	4.38E-01	4.38E-01	2.246E+00	PCI/SA	0.686	1.0E+0	2.493E-1
31025	9HX818	10	J6B27015815 000363	AIR		00:00:8		6:45:00 AM		
ALPHA	BAS7	0	4/7/2006 11:31:06 AM -8.6245E-01					1.0	1.0E+0	2.085E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM -1.2859E+00					1.0	1.0€+0	3.447E-2
RA-226	BXTE	0	4/10/2006 3:14:00 PM 1.1151E-01					1.046	€.33E-1	2.509E-1
RA-228	BXTF	0	4/12/2006 6:43:34 AM 6.1757E-01	3.751E-01		1.662E+00		0.937	1.0E+0	2.509E-1
31025	9HX81N	10	J6B2701581 P 0510	AIR				6:00:00 AM		
ALPHA	BAS7	0	4/6/2006 6:03:23 PM 2.1099E+00					1.0	1.0E+0	2.091E-2
BETA	BDS8	0	4/5/2006 9:14:39 AM 1.3188E+01					1.0	1.0E + 0	3.278E-2
RA-226	BXTE	0	4/10/2006 2:53:00 PM 2.6364E-01			5.224E-01		0.993	8.33E-1	2.511E-1
RA-228	BXTF	0	4/12/2006 6:41:36 AM 7.5195E-01	5.665E-01		2.508E+00		0.875	.0E+0	2.511E-1
31025	9HX81C	10	J6B2701582 P 0511	AIR				6:35:00 AM		
ALPHA	BAS7	0	4/6/2006 6:03:23 PM 2.9199E+00					1.0	:.0E+0	2.082E-2
BETA	BDS8	0	4/5/2006 9:14:39 AM 1.1516E+01					1.0	1.0E+0	3.315E-2
RA-226	BXTE	0	4/10/2006 2:51:00 PM -2.2718E-01					0.912	8.33E-1	2.502E-1
RA-228	BXTF	0	4/12/2006 6:41:36 AM 1.6354E+00	6.613E-01				0.772	1.0E+0	2.502E-1
31025	9HX81F	10	J6B2701583 P 0512	AIR				5 7:15:00 AM		
			4/6/2006 6:03:23 PM 4.8606E+00					1.0	1.0€+0	2.087E-2

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^{6060344, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 17 | 0 | 0 | 0.

**Diff RptDb | Qtims => .

SDG or Batch	Rpt Db Id			Client Id	Matrix		ved Date	Sample Da			
Isotope			Oc Analysis Date	_Result		Tot uncert			xpected Yield		lumes
BETA	BDS8	0	4/5/2006 9:14:39 AM	1.3284E+01		1.895E+00		PCI/SA	1.0	1.0E+0	3.319E-2
RA-226	BXTE	0	4/10/2006 2:51:00 PM		• · · · • - • -	8.232E-02			1.151	8.33E-1	2.508E-1
RA-228	BXTF	0	4/12/2006 6:41:36 AM		4.783E-01	4.783E-01			1.014	1.0E+0	2.508E-1
31025	9HX81T1	0	J6B2701584 P	0513	AIR	2/27/20	00:00:8 000	2/5/2006 7:	:45:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM	9.6327E+00	2.24E+00	2.454E+00	5.858E+00	PCI/\$A	1.0	1.0E+0	2.052E-2
BETA	BDS8	0	4/5/2006 9:14:52 AM	1.9108E+01	1.8E+00	2.227E+00	5.406E+00	PCI/SA	1.0	1.0E+0	3.204E-2
RA-226	BXTE	0	4/10/2006 2:50:01 PM	2.633E-01	2.287E-01	2.305E-01	8.009E-01	PCI/SA	0.98	8.33E-1	2.462E-1
RA-228	BXTF	0	4/12/2006 6:42:05 AM	4.913E-02	4.822E-01	4.822E-01	2.32E+00	PCI/SA	0.843	1.0E+0	2.463E-1
31025	9HX81V1	0	J6B2701585 P	0514	AIR	2/27/20	00:00:8 800	2/5/2006 8:	15:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM	9.0898E+00	2.055E+00	2.261E+00	4.93E+00	PCI/SA	1.0	1.0E+0	2.086E-2
BETA	BDS8	0	4/5/2006 9:14:52 AM	1.6437E+01	1.736E+00	2.071E+00	5.472E+00	PCI/SA	1.0	1.0E+0	3.311E-2
RA-226	BXTE	0	4/10/2006 2:50:03 PM	1.4068E-01	1.354E-01	1.363E-01	4.886E-01	PCI/SA	1.081	8.33E-1	2.515E-1
RA-228	BXTF	0	4/12/2006 6:42:05 AM	1.2728E+00	4.537E-01	4.683E-01	1.95E+00	PCI/SA	0.971	1.0E+0	2.515E-1
31025	9HX81W1	10	J6B2701586 P	0515	AIR	2/27/20	00:00:8 600	2/5/2006 8:	40:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM	6.5328E+00	1.979E+00	2.091E+00	5.942E+00	PCI/SA	1.0	1.0E+0	2.095E-2
ВЕТА	BD\$8	0	4/5/2006 9:14:52 AM	1.3832E+01	1.591E+00	2 017E+00	5.064E+00	PCI/SA	1.0	1.0E+C	3.342E-2
RA-226	BXTE	0	4/10/2006 2:51:01 PM	2.3557E+00	2.987E-01	3.921E-01	7.098E-01	PCI/SA	0.934	8.33E-1	2.51E-1
RA-228	BXTF	0	4/12/2006 6:42:05 AM	1.8877E+01	1.088E+00	1.556E+00	2.545E+00	PCI/SA	0.823	1.0E+0	2.51E-1
] 31025	9HX81X1	0	J6B2701587 P	0516	AIR	2/27/20	00:00:8 800	2/5/2006 6:	10:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM	2.9152E+00	1.602E+00	1.63E+00	5.964E+00	PCI/SA	1.0	1.0E+0	2.083E-2
BETA	BDS8	0	4/5/2006 9:14:52 AM	1.3292E+01	1.748E+00	1.989E+00	5.916E+00	PCI/SA	1.0	1.0E+0	3.372E-2
RA-226	BXTE	0	4/10/2006 2:50:00 PM	-1.184E-01	1.327E-01	1.332E-01	5.743E-01	PCI/\$A	1.019	8.33E-1	2.505E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM	1.8376E+00	4.353E-01	4.603E-01	1.647E+00	PCI/SA	0.913	1.0E+0	2.505E-1
31025	H0ERC1A	٩B	J6C010000344 IN	ITRA-LAB BLA	NK AIR	2/27/20	00:00:8 600	2/5/2006 6:	00:00 AM		
RA-228	BXTF	о В	4/12/2006 6:43:34 AM	9.6731E-02	9.371E-02	9.371E-02	4.314E-01	PCI/SA	0.99	1.0E+0	1.0E+0
31025	H0ERC10	cs	J6C010000344	ITRA-LAB CHE	ECK AIR	2/27/20	00:00:8	2/5/2006 6:	00:00 AM		į
FIA-228	BXTF	0 S	4/12/2006 7:54:51 AM	3.8773E+00	2.408E-01	3.289E-01	4.422E-01	PCI/SA 5.08	24E+00 0.861	1.0E+0	1.0E+0

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^{6060344, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 17 | 0 | 0 | 0.

**Diff RptDb | Qtims => .

Alpha Beta, Ra-228 by GPC , Results 4/12/2006 8:12:36 AM Batch Nbr: 6060344 Summary Report QC Yield RYId IDC Uncert Q Units Av ILcC Parameter Sa Act Status Meth Matrix Wrk Ord Ra-226/Ra-228 Deem With Out Blk Subt. CRDL Ra-228 by GPC 38% R 1.78E+00 3.90E+00 (8.49E-01) U4 PCI/SA **RA-228** 3.83E-01 HX81N1AD TF AIR Calc 1.98E+00 4.33E+00 88% (9.09E-01) U4 PCI/SA 6.07E-03 RA-228 AIR HX81N1AD TF Calc 88% R 2.19E+00 4.80E+00 (1.16E+00) U4 PCI/SA HX81N1AD **RA-228** 1.87E+00 Calc TF AIR 88% 1.14E+00 2.51E+00 (5.67E-01) U4 PCI/SA 7.52E-01 ŢF AIR HX81N1AD RA-228 Calc 1,14E+01 2.49E+01. 88% PCI/SA (6.45E+00)RA-228 1.53E+01 HX81N1AD Calc TF AIR 77% (1.01E+00) U4 PCI/SA R 2.00E+00 4.38E+00 RA-228 1.09E+00 HX81Q1AD Calc TF AIR 77% 2.22E+00 4.86E+00 2.31E+00 (1.21E+00)PCI/SA RA-228 HX81Q1AD TF AIR Calc 77% (1.25E+00) U4 PCI/SA 2.46E+00 5.39E+00 AIR HX81Q1AD RA-228 1.51E+00 Calc TF 1.28E+00 2.81E+00 77% PCI/SA (6.70E-01) **BA-228** 1.64E+00 TF HX81Q1AD Calc AIR 77% (6.09E+00) U4 PCI/SA 1.27E+01 2.77E+01 4.05E+00 Calc TF AIR HX81Q1AD **RA-228** R 1.67E+00 3.65E+00 101% (7.58E-01) U4 PCI/SA -1.62E-01 HX81R1AD **RA-228** Calc TF AIR 101% 1.86E+00 4.05E+00 (7.96E-01) U4 PCI/SA TF AIR HX81R1AD RA-228 -8.07E-01 Calc 2,06E+00 4.49E+00 101% (9.22E-01) U4 PCI/SA **RA-228** -3.39E-01 HX81R1AD TF Calc AIR 101% (4.78E-01) U4 PCI/SA 1,08E+00 2.35E+00 HX81R1AD RA-228 -4.36E-01 Calc TF AIR 1.05E+01 2.28E+01 101% (4.85E+00) U4 PCI/SA TF AIR HX81R1AD **RA-228** 1.07E+00 Calc 84% (7.66E-01) U4 PCI/SA 1,63E+00 3.61E+00 HX81T1AD **RA-228** 2.60E-01 Calc TF AIR 1,81E+00 4.00E+00 84% (7.86E-01) U4 PCI/SA HX81T1AD **RA-228** -4.33E-01 AIR Calc TF 84% (9.42E-01) U4 PCI/SA 2.01E+00 4.44E+00 **RA-228** 3.20E-01 HX81T1AD Calc TF AIR 84% 1.05E+00 2.32E+00 (4.82E-01) U4 PCI/SA TF HX81T1AD RA-228 4.91E-02 AIR Calc 84% (4.63E+00) U4 PCI/SA 1.11E+01 2.45E+01 HX81T1AD RA-228 -5.56E+00 Calc TF AIR 97% 1.36E+00 3.03E+00 (7.69E-01) PCI/SA **RA-228** 1.58E+00 Calc TF AIR HX81V1AD 97% (7.94E-01) U4 PCI/SA 1.51E+00 3.36E+00 HX81V1AD RA-228 1.13E+00 Calc TF AIR 97% (8.68E-01) U4 PCI/SA 1.68E+00 3.73E+00 RA-228 1.11E+00 TF HX81V1AD Calc AIR 97% 8.77E-01 1.95E+00 PCI/SA (4.68E-01) HX81V1AD RA-228 1.27E+00 Calc TF AIR 97% R 8.50E+00 1.89E+01 (4.33E+00) U4 PCI/SA HX81V1AD **RA-228** 4.91E+00 TF AIR Calc 1.80E+00 3.96E+00 82% (2.71E+00)PCI/SA 1.99E+01 HX81W1AD RA-228 Calc TF AIR R 2.00E+00 4.39E+00 82% PCI/SA (2.61E+00)HX81W1AD **RA-228** 1.80E+01 TF AIR Calc 82% 2.22E+00 4.87E+00 PCI/SA (2.76E+00)1.87E+01 HX81W1AD RA-228 Calc TF AIR 1.16E+00 2.54E+00 8.2% PCI/SA HX81W1AD **RA-228** 1.89E+01 (1.56E+00)TF AIR Calc 1.09E+01 2.41E+01 8:2% PCI/SA (1.28E+01)RA-228 8.29E+01 Calc TF AIR HX81W1AD 1.08E+00 2.56E+00 91% PCI/SA **RA-228** 2.65E+00 (8.40E-01) Calc TF AIR HX81X1AD 91% PCI/SA 1.20E+00 2.84E+00 (8.12E-01) HX81X1AD RA-228 1.96E+00 Calc TF AIR R 1.33E+00 3.15E+00 91% (7.36E-01) U4 PCI/SA HX81X1AD **RA-228** 9.05E-01 Çalc TF AIR 91% 6.96E-01 1.65E+00 1.84E+00 (4.60E-01) PCI/SA **RA-228** Calc TF AIR HX81X1AD R 7.35E+00 1.72E+01 91% (3.16E+00) U4 PCI/SA HX81X1AD **FIA-228** -1.40E+00 Calc TF AIR R 1.19E+00 2.76E+00 94% PCI/SA (7.95E-01) Calc HX8111AD **RA-228** 2.11E+00 TF AIR (7.39E-01) U4 PCI/SA 1.32E+00 3.06E+00 94% 1.11E+00 TF AIR **HX8111AD** RA-228 Calc R 1.47E+00 3.39E+00 94% PCI/SA **PA-228** 1.57E+00 (8.60E-01) **HX8111AD** Calc TF AIR RecCnt:39 (1s Uncertainities) Page 1 DC - Instrument Detection Level in Conc Units RADCALC v4.8.21 MLcC- Method Decision Level in Conc Units Q - Qualifier, U is Less Than Lc = 1.645*TPU

MDC - Minimum Detectable Concentration *Std - Lc, MDC using StdDev for Set of Blanks All Results Displayed to Three Digits Reguardless of Significants

Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Batch	Nbr: 6	6060344		Alpha E	Beta, Ra-	228 by GI	PC ,	Results	4,	/12/2006 8:1	2:36 AM
					Sum	mary Rep	ort				
Status	Meth	Matrix	Wrk Ord	Parame	ter Sa Act	Uncert C) Units	Av ILcC	IDC	QC Yield	RYId
Calc	TF	AIR	HX8111AD	RA-228	1.60E+00	(4.62E-01)	PCI/SA	A 7.66E-01	1.77E+00.	94,%	
Calc	TF	AIR	HX8111AD	RA-228	-3.06E+00	(3.15E+00) U	J4 PCI/SA	R 7.75E+00	1.79E+01	94%	
Calc	TF	AIR	HX8121AD	RA-228	4.62E+00	(1.42E+00)	PCI/SA	R 1.89E+00	4 41F+00	57%	
Calc	TF	AIR	HX8121AD	RA-228	4.87E+00	(1.55E+00)	PCI/SA	R 2.10E+00		57%	
Calc	TF	AIR	HX8121AD	RA-228	4.00E+00	(1.55E+00)	PCI/SA	R 2.33E+00		57%	
Calc	TF	AIR	HX8121AD	RA-228	4.50E+00	(8.71E-01)	PCI/SA	A 1.22E+00			
Calc	TF	AIR	HX8121AD	RA-228	7.04E+00	(6.26E+00) L		R 1.17E+01		57%	
Calc	TF	AIR	HX8131AD	RA-228	2.29E+00	(7.96E-01)	PCI/SA	R 1.07E+00		88%	
	TF	AIR	HX8131AD	RA-228	5.57E-01	(6.24E-01) L		R 1.19E+00		88%	
Calc	TF	AIR	HX8131AD	RA-228	2.63E+00	(9.57E-01)	PCI/SA	R 1.32E+00		88%	
Calc	TF	AIR	HX8131AD	RA-228	1.82E+00	(4.64E-01)	PCI/SA	A 6.90E-01		88%	
	TF	AIR	HX8131AD	RA-228	4.71E+00	(4.08E+00) U		R 7.59E+00	•	88%	
						` ,					
	TF	AIR	HX8141AD	RA-228	2.81E+00	(8.85E-01)	PCI/SA	R 1.15E+00		81%	
		AIR	HX8141AD	RA-228	1.26E+00	(7.52E-01)	PCI/SA	R 1.27E+00		81%	
		AIR	HX8141AD	RA-228	2.71E+00	(9.99E-01)	PCI/SA	R 1.41E+00		81%	
		AIR	HX8141AD	RA-228	2.26E+00	(5.10E-01)	PCI/SA	A 7.36E-01	· · · · · · · · · · · · · · · ·		
Calc		AIR	HX8141AD	RA-228	1.01E+01	(5.27E+00)	PCI/SA	R 9.09E+00	2.07E+01	81%	
		AIR	HX8151AD	RA-228	2.52E+00	(8.39E-01)	PCI/SA	R 1.15E+00	2.69E+00	82%	
		AIR	HX8151AD	RA-228	1.35E+00	(7.57E-01)	PCI/SA	R 1.28E+00	2.98E+00	82%	
		AIR	HX8151AD	FIA-228	1.67E+00	(8.62E-01)	PCI/SA	R 1.41E+00	3.31E+00	82%	
		AIR	HX8151AD	RA-228	1.85 E+ 00	(4.74E-01)	PCI/SA	A 7.39E-01	1.73E+00	82%	
Calc	TF	AIR	HX8151AD	RA-228	4.86E+00	(4.35E+00) U	4 PCI/SA	R 8.27E+00	1.90E+01	82%	
Calc	TF	AIR	HX8161AD	RA-228	2.04E+01	(2.64E+00)	PCI/SA	R 9.92E-01	2.32E+00	101%	
Calc	TF	AIR	HX8161AD	RA-228	2.43E+01	(3.10E+00)	PCI/SA	R 1.10E+00	2.57E+00	101%	
Calc	TF	AIR	HX8161AD	RA-228	2.03E+01	(2.75E+00)	PCI/SA	B 1.22E+00	2.85E+00	101%	
Calc	TF	AIR	HX8161AD	RA-228	2.17E+01	(1.64E+00)	PCI/SA	A 6.38E-01	1.49E+00 _,	101%	
Calc	TF	AIR	HX8161AD	RA-228	9.26E+01	(1.30E+01)	PCI/SA	R 6.62E+00	1.54E+01	101%	
Calc	TF .	AIR	HX8171AD	RA-228	8.45E-01	(7.93E-01) U	4 PCI/SA	R 1.51E+00	3.49E+00	69%	
Calc	TF .	AIR	HX8171AD	RA-228	-2.47E-01	(7.30E-01) U	4 PCI/SA	R 1.67E+00	3.88E+00	69%	
Calc	TF .	AIR	HX8171AD	RA-228	-7.12E-01	(7.51E-01) U	4 PCI/SA	R 1.85E+00	4.30E+00	69%	
Calc '	ΓF .	AIR	HX8171AD	RA-228	-3.78E-02	(4.38E-01) U	4 PCI/SA	A 9.69E-01	2.25E+00	69%	
Calc -	TF .	AIR	HX8171AD	RA-228	6.23E+00	(5.72E+00) U	4 PCI/SA	R 1.11E+01	-	69%	
Calc	ΓF .	AIR	HX8181AD	RA-228	5.92E-01	(5.86E-01) U	4 PCI/SA	R 1.12E+00	2.59E+00	94%	
		AIR	HX8181AD	RA-228	3.75E-01	(6.17E-01) U		R 1.24E+00		94%	
		AIR	HX8181AD	RA-228	8.86E-01	(7.40E-01) U		R 1.38E+00		94%	
Calc -	F /	AIR	HX8181AD	RA-228	6.18E-01	(3.76E-01) U		A 7.21E-01		94%	i
		AIR	HX8181AD	RA-228	-4.41E+00	(2.94E+00) U		R 7.64E+00	•	94%	
		AIR	H0ERC1AA	RA-228	9.39E-02	(1.45E-01) U					
		AIR	HOERCIAA	RA-228	-3.55E-02	(1.45E-01) U ⁴		B 3.93E-01			
	. ,		HOLHOTAA	IM-EEU	-U.JJE*UZ	(1.45=41) 04	FOUSA	R 3.25E-01	7.40E-VI 📙	99%	
- (1	Lincerta	·									

RecCnt:78 RADCALC v4.8.21 STL Richland

^{() - (1}s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 2

Q - Qualifier, U is Less Than Lc = 1.645*TPU All Results Displayed to Three Digits Reguardless of Significants Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch	Nbr: 6	060344	-	Alpha Be	eta, Ra-2	228 by G	P(C , F	les	ults	4	1/12/2	2006 8:1	2:37 AM
					Sumn	nary Re	oq	rt						
Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYId
Calc	TF	AIR	H0ERC1AA	RA-228	2.32E-01	(1.92E-01)	U4	PCI/SA	B	3.61E-01	8.26E-01	В	99%	
Calc	TF	AIR	H0ERC1AA	RA-228	9.67E-02	(9.37E-02)	U4	PCI/SA	Α	1.88E-01	4.31E-01	В	99%	
Calc	TF	AIR	H0ERC1AA	RA-228	9.10E-01	(9.02E-01)	U4	PCI/SA	R	1.74E+00	4.00E+00	В	99%	
Calc	TF	A!R	H0ERC1AC	RA-228	4.37E+00	(6.01E-01)		PCI/SA	R	2.96E-01	6.88E-01	S	86%	86%
Calc	TF	AIR	H0ERC1AC	RA-228	3.78E+00	(5.59E-01)		PCI/SA	R	3.28E-01	7.63E-01	S	86%	74%
Calc	TF	AIR	H0ERC1AC	RA-228	3.49E+00	(5.48E-01)		PCI/SA	R	3.64E-01	8.47E-01	S	86%	69%
Calc	TF	AIR	H0ERC1AC	RA-228	3.88E+00	(3.29E-01)		PCI/SA	Α	1.90E-01	4.42E-01	S	86%	76%
Calc	TF	AIR	H0ERC1AC	RA-228	3.78E+00	(1.82E+00)	1	PCI/SA	R	3.33E+00	7.28E+00	S	86%	74%

Panderson 4-12.06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 3

Q - Qualifier, U is Less Than Lc = 1.645*TPU All Results Displayed to Three Digits Reguardless of Significants Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:85 RADCALC v4.8.21 STL Richtand

Batch Nbr: 6060344 Alpha Beta, Ra-228 by GPC , Calculated Results

Detailed Report

4/12/2006 8:12:37 AM

									1	Jetalled	neport								
δq	Status Method	Matrix P	rotoco	Equation S	et Wr	k Ord	Units/M	latrix C	C/BE	Sa/On Date	AnalysisDa	te/PptW	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/Ent	Yld Total/Anal	y Vol Final/Co	unt Vol
1	Calc TF A	uR •	STLE	Ra228WoB	S HX81	N1AD	PCI/SA	1	02	/05/06 06:00	04/12/06	06:41		06 11:40	RATA21	•	1.00	Sa /	
364	03,P 0510			,J6B270	158-1 v4.8.	21	AIR				30.3		04/11/	06 09:57 ~	RATA21	346 Alq 99%	6 0.2511111	Sa	
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkg	rnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent E	lik Value	Ingr Fct	Conv Fct/VolAd	ij Decay	Abn
D	04/11/06 14:19	RA-228	40	∠ 255	(GPC7A	1	N	N	5.1990E-01	1.0000E+00	N	88%	N				1.0190E+00	
			50	345	i			Υ		(1.201E-02)	(0.000E+00)		7%			(0.000E+00)	3.982304		
1	04/11/06 15:14	RA-228	37	- 255	5 (GPC7A	1	N		5.1990E-01	1.0000E+00	N	88%	N			4.5045E-01	1.0190E+00	
			50	345				Υ		(1.201E-02)	(0.000E+00)		7%			(0.000E+00)			
2	04/11/06 16:10	RA-228	49	, 255		3PC7A	1	N	N	5.1990E-01	1.0000E+00	N	88%	N			4.5045E-01	1.0190E+00	
			50	345				Y		(1.201E-02)	(0.000E+00)		7%			(0.000E+00)			
3	04/12/06 06:41	RA-228	57 -			3PC7A	1	N	N		1.0000E+00		88%	N		9.9130E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
		_	50	400			N			(0.000E+00)		7%	VI-14 F-F-4	01 W-			MDC StdDvM	404 -0
5	iq Calc Date	Parameter	Avg		<u> </u>		Ont Rt	Dpm				Used			Chem 110	EFctU IDC/ILc		MDC SIGDAMI	ac/Lec
	04/12/06	RA-228	R	0.383259 (0.848965)	U4	6.0869		0.2090		0.20966 (0.4642)		1.0 0.027062	10 Sa 21	88%		3.90102 1.78093			
	04/12/06	RA-228	R	0.006074	114	8.6956	,	0.003		0.00332	, (4		-, 10 Sa	88%		4.32764			
	04/12/00	117-220	••	(0.909186)	54	(1.301		(0.497				.027062		55		1.97570			
	04/12/06	RA-228	R	1.866523	U4	2.4087	0E-01	1.021	087	1.02108	7	1.0	00 Sa	88%		4.80106	59		
	•			(1.158024)		(1.474	5E-01)	(0.630	835)	(0.6308)	35) (0	.027062	2)			2,19183	35		
	04/12/06	RA-228	Α	0.751952	U4	1.0087	0E-01	0.411		0.41135		1.0	0 Sa	88%		2.50757	4		
				(0.566508)		(7.946	2E-02)	(0.309	28)	(0.3092)	3) (0	0.015624	4)			1.14478	34		
	04/12/06	RA-228	R	15.335877		3.8500		8.389		8.38953			00 Sa	88%		24.9198			
				(6.44692)			2E-01)	(3.494		·		0.027062	<u> </u>			11.3872			
Sq	Status Method	Matrix I	Protoco	ol Equation S	set W	rk Ord	Units/i	Matrix 1	эслв	B Sa/On Date	AnalysisD	ate/PptW	Vt Sep1/	Sep2 Date	QC/Trace	r Vial Mult/En	tyid Total/Ana	ly Vol Final/Co	ount Vo
2		AIR	*STLE	Ra228Wol			PCI/S	A	02	2/05/06 06:35	04/12/06	06:41		/06 11:40	RATA2	•	1.00		
536	403,P 0511			,J6B270	0158-2 v4.8	3.21	AIR				29.1			/06 09:57			%, 0.250217		
S	q Cnt Date	Parameter	San	nple Cnt Bkg	rnd Cnt	Instr	Geom	Trc/Av		t Efficiency1	Efficiency 2		Yld Fct		Bik Value	Ingr Fct	Conv Fct/VolA	<u> </u>	Abn
0	04/11/06 14:19	RA-228	44	25		GPC7B	1	N	Ν	5.2319E-01	1.0000E+00		77%	N		1.5669E+00	4.5045E-01 3.996529	1.0190E+00)
			50	34				Y		(1.266E-02)	(0.000E+00)		6%					4 040-=	
1	04/11/06 15:14	RA-228	51	25		GPC7B	1	N	N	5.2319E-01	1.0000E+00 (0.000E+00)		77% 6%	N			3.996529	1.0190E+00)
			50	34			4	Y		(1.266E-02)	,	•		K 1				4.04000.00	`
2	04/11/06 16:10	RA-228	45	25		GPC7B	1	N	N	5.2319E-01 (1.266E-02)	1.0000E+00 (0.000E+00)		77% 6%	N			3.996529	1.0190E+00	,
			50	34	b			Υ		(1.2000-02)	(0.000E700	,	379			(0.0002+00	·,		
_		> 0 0		. 10.1- 4	1	045 t TS:				Pag	e 1				,	Rec	Cnt:2	RADCALC v4	.8.21
(i)	- (1s Uncertainiti C - Instrument Det	ection Level in C	Conc Hr	nite MilcC - M	ethod Deci	sion Level	Lin Conc I	Units, MI	DC- N	dinimum Detecta	able Concentrati	оп		A:		. 100		STL Richland	
Sr∙	89 Counts are De	ived from the C	ombina	ition of Each S	r-89/90 and	1 Y-90 Co	unt, All R	esult Digi	ts Ma	y Not be Signifi	cants, Date/Tim	ne - mm/d	id/yy hh:mm	i, 24hr time			T CANADA WY BEFORE AN TO SPECIFICATION		

В	atch Nbr: 60	50344			Αl	pha Beta	, Ra-22	28 by GF	PC , C	alculate	ed Result	ts	4/12/	2006 8:12:37 A
0	4/12/06 06:41	RA-228	41 50	292 400	G	PC7B 1		5.2319E-01 (1.266E-02)	1.0000E+00 (0.000E+00)		"% N %	9.9130E+00 (0.000E+00)	4.5045E-01 1 3.996529	.0190E+00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo B	lk Dpm-B	ik Vol	Used	Yield,EnFct	Chem Yld,EFctU IDC/ILcC	BikLcC/MD	C StdDvMdC/Lc
	04/12/06	RA-228	R	1.085425 (1.005459)	U4	1.52464E-01 (1.4039E-01)	0.591676 (0.547053)	0.591676 (0.54705	_,	1.00 Sa 027062)	77%	4.37913 1.99782		
	04/12/06	RA-228	R	2.30982 (1.207687)		2.92464E-01 (1.5003E-01)	1.259106 (0.654419)	1.259106 (0.65441)		1.00 Sa .027062)	77%	4.858036 2.216304		
	04/12/06	RA-228	A	1.51109 (1.251823)	U4	1.72464E-01 (1.4181E-01)	0.823711 (0.680773)	0.823711 (0.68077		1.00 Sa .027062)	77 %	5.389485 2.458758		
	04/12/06	RA-228	Α	1.635445 (0.669703)		2.05797E-01 (8.3218E-02)	0.891498 (0.363774)	0.891498 (0.36377		1.00 Sa .015624)	77%	2.8149 1.284197	,	
	04/12/06	RA-228	R	4.053512 (6.094059)	U4	9.00000E-02 (1.3500E-01)	2.20961 (3.319557)	2.20961 (3.31955	7) (0	1.00 Sa .027062)	77%	27.74681 12.66036		
q S	tatus Method			l Equation Set				3 Sa/On Date	AnalysisDa		Sep1/Sep2 Date	QC/Tracer Vial Mult/EntY	/id Total/Analy \	ol Final/Count
	alc TF A 3,P 0512	AIR	*STLE	Ra228WoBS ,J68270158		•	\ 02	/05/06 07:15	04/12/06 30.3		04/03/06 11:40 04/11/06 09:57	RATA21348 1 RATA21348 Alq 1159	1.00 Sa 0.250795 Sa	
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	i Cnt	Instr Geom	Trc/Av Ent	Efficiency1	Efficiency 2	Ent Yic	Fct Ent	Blk Value Ingr Fct	Conv Fct/VolAdj	Decay A
C)4/11/06 14:19	RA-228	39 50	279 345	G	IPC7C 1	N N Y	5.0716E-01 (1.091E-02)	1.0000E+00 (0.000E+00))1% N 3%	1.5669E+00 (0.000E+00)	4.5045E-01 3.987326	1.0190E+00
C)4/11/06 15:14	RA-228	34 50	279 345	G	iPC7C 1			1.0000E+00 (0.000E+00)		01% N 8%	1.7383E+00 (0.000E+00)		1.0190E+00
C	04/11/06 16:10	RA-228	38 50	279 345	G	PC7C 1			1.0000E+00 (0.000E+00))1% N 3%	1.9284E+00 (0.000E+00)		1.0190E+00
(04/12/06 06:41	RA-228	41 50	316 400	G	PC7C 1		5.0716E-01 (1.091E-02)	1.0000E+00 (0.000E+00))1% N 3%	9.9130E+00 (0.000E+00)	· · · · · · · · · · · · · · · · · · ·	1.0190E+00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dom Wo B	lik Dpm-E	3lk Vol	Used	Yield,EnFc	t Chem Yid,EFctU IDC/lLc	C BIKLaC/M	DC StdDvMdC/I
	04/12/06	RA-228	R	-0.162268 (0.757668)	U4	-2.86957E-02 (1.3396E-01)	-0.088659 (0.413939)	-0.08865 (0.41393		1.00 Sa .027062)	101%	3.65058 1.67304	4	
	04/12/06	RA-228	R	-0.807337 (0.796261)	U4	-1.28696E-01 (1.2627E-01)	-0.441107 (0.434332)	-0.44110 (0.43433		1.00 Sa .027062)	101%	4.04981 1.85600		
	04/12/06	RA-228	R	-0.338897 (0.92244)	U4	-4.86957E-02 (1.3245E-01)	-0.185164 (0.503887)	-0.18516) (0.50386		1.00 Sa 1.027062)	a 101%	4.49284 2.05904		
	04/12/06	RA-228	Α	-0.436167 (0.478306)	U4	-6.86957E-02 (7.5596E-02)	-0.23831 (0.261171)	-0.23831 (0.26117		1.00 Sa 9.015624)	a 101%	2.34659 1.07542		
	04/12/06	RA-228	R	1.073236 (4.850593)	U4	3.00000E-02 (1.3555E-01)	0.586387 (2.650024)	0.58638 ⁻) (2.65002		1.00 Sa 2.027062)	a 101%	22.8490 10.4612		
				sult is Less Than				Page				Rec	Cnt:4 R	ADCALC v4.8.2
c.	- Instrument Dete	ction Level in C	Conc Un	its, MLcC - Metho	od Decisi	ion Level in Conc U Y-90 Count, All Re					hh:mm 24hr Time		S	TL Richland

E	Batch Nbr: 60	060344			Alpha	Beta	, Ra	-22	28 by GF	PC , C	alcul	ated	Resul	ts		4/12	2/2006 8:12:0	38 A
q S	Status Method	Matrix I	ratocal Equ	ation Set	Vrk Ord	Units/M	atrix Q	C/BE	Sa/On Date	AnalysisDa	te/PptWI	Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	Vol Final/Cou	unt V
	Calc TF 03,P 0513	AIR		28WoBS HXI J6B270158-4 v4		PCI/SA AIR	4	02	/05/06 07:45	04/12/06 (29.6	06:42		06 11:40 06 09 :57	RATA21 RATA21		1.00 S 0.246263 S		
Sq	Cnt Date	Parameter	Sample Cn	t Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	Decay	Ab
	04/11/06 14:19	RA-228	31	232	GPC1A	1	N			1.0000E+00	N	84%	Ν				1.019 0E +00	
			50	400			Υ		,	(0.000E+00)		7%			(0.000E+00)			
	04/11/06 15:14	RA-228	26	232	GPC1A	1	N			1.0000E+00 (0.000E+00)	N	84% 7%	N		1.7389E+00 (0.000E+00)		1.0190E+00	
		D4 000	50	400	CDC14	4	Y N		(1.454E-02) 5.3295E-01	1.0000E+00	N.	84%	N				1.0190E+00	
	04/11/06 16:10) RA-228	31 50	232 400	GPC1A	1	Y	IN		(0.000E+00)	N	7%	14		(0.000E+00)		1.01000	
	04/12/06 06:42	2 RA-228	27	270	GPC1A	1	N.	N	,	1.0000E+00	N	84%	N				1.0190E+00	
	04/12/00 00:42	I IN ZZO	50	400		,	N		(1.454E-02)			7%			(0.000E+00)	4.060701		
s	q Calc Date	Parameter	Avg S	a Act Q	Net	Cnt Rt	Dpm \	Wo E	ik Dpm-E	31k Yol	Used		Yield,EnFc	t Chem Yld	EFctU IDC/ILce	C BIKLcC/	MDC StdDvMc	dC/L
	04/12/06	RA-228	R 0.26	0093 L	4 4.0000		0.1395		0.13954			0 Sa	84%		3.60891		-	
			(0.7€	5569)	(1.176	•	(0.410	719)	•	•	.027062	•			1.629213			
	04/12/06	RA-228	R -0.43		4 -6.000	00E-02 6E-01)	-0.232 (0.421				1.0 027062.	0 Sa	84%		4.003593 1.80738			
	0.4/4.0/08	RA-228	(0.78 R 0.32	86473) 0101	4.0000	•	0.1717		0.17173			- <i>1</i> 0 S a	84%		4.44156			
	04/12/06	NA-220		42351)		9E-01)	(0.505				.027062		0.,0		2.00510			
	04/12/06	RA-228	A 0.04	·	4 6.6666	67E-03	0.0263	358	0.02635	8	1.0	0 Sa	84%		2.31980	9		
			(0.48	82222)	(6.629	1E-02)	(0.258	643) (0.25864	13) (0	.015624	t)			1.04725	7		
	04/12/06	RA-228	R -5.5		J4 -1.350		-2.981 (2.480					0 S a	84%		24.4684 11.1254			
				34154)	<u> </u>	75E-01)			8 Sa/On Date	AnalysisDa	.027062		Sep2 Date	OC/Trace		Yld Total/Anai	v Vol. Final/Co	ount
q	Status Method	Matrix	Protocol Eq	·	Wrk Ord					_							-	-
	Calc TF 403,P 0514	AIR	*STLE Rat	228WoBS НХ у 36B270158-5 у		PCI/S AIR	A	0	2/05/06 08:15	04/12/06 30.9	06:42		/06 11:40 /06 09:57	RATA2 RATA2		1.00 % / 0.251492		
Sc		Paramete	r Sample C	nt Bkgrnd Cni			Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yid Fct		Bik Value	Ingr Fct	Conv Fct/VolA		A
	04/11/06 14:1		41	216	GPC1C	1	N	N	5.2188E-01	1.0000E+00	N	97%	N	- The same Age of the same		4.5045E-01	1.0190E+00	
			50	400			Υ		(1.168E-02)	(0.000E+00)		8%			(0.000E+00)	3.976263		
	04/11/06 15:1	4 RA-228	36	216	GPC1C	1	N	N	5.2188E-01	1.0000E+00	N	97%	N			4.5045E-01	1.0190E+00)
			50	400			Υ		(1.168E-02)	(0.000E+00)		8%			(0.000E+00	3.976263		
	04/11/06 16:1	0 FIA-228	35	216	GPC1C	1	N	N	5.2188E-01			97%	N			4.5045E-01	1.0190E+00)
			50	400			Υ		,	(0.000E+00)		8%			(0.000E+00			_
	04/12/06 06:4	2 RA-228	33	209	GPC1C	1	N	N	5.2188E-01			97% 8%	N		9.9220E+00 (0.000E+00		1.0190E+00)
			50	400			N		(1.168E-02)	(0.000E+00)	,	0%			(U.UUUE+00	, 5.5. 5250		
()	- (1s Uncertaini	ties), Q - Qualit	ier, U Result is	Less Than Lc =	1.645 * TPl	 J			Pag						Red	Cnt:5	RADCALC v4	-
íbo	Instrument De	tection Level in	Conc Linite M	ILcC - Method Di	ecision Leve	l in Conc !	Units, Mi	OC-N	dinimum Detecta Ly Not be Signific	ble Concentration	on o - mm/d	ld/se bb:ma	n 24hr Tima	5			STL Richland	i

	Batch Nbr: 60	060344			А	upna	Beta	a, Ha	-22	28 by GF	C, O	Calcul	ated	Resul	ts		4/1:	2/2006 8:1:	2:38 A
S	q Calc Date	Parameter		·	a	Net	Cnt Rt	Dpm '	Wo B	lk Dpm-E	lk Vo	Used		Yield,EnFct	Chem Yld	EFctU (DC/ILct		ADC StdDvA	
	04/12/06	RA-228	R	1.580154 (0.768508)		2.8000 (1.332	00E-01 3E-01)	0.8657 (0.418		0.865768 (0.41817		1.00 1.027062)	Sa	97%		3.033008	_		
	04/12/06	RA-228	R	1.126904 (0.793843)	U4	1.8000 (1.255	00E-01 0E-01)	0.6174 (0.433		0.617432 (0.43352		1.00 (027062)	Sa	97%		3.364698 1.513586	3		
	04/12/06	RA-228	R	1.11127 3 (0.867749)	U4	1.6000		0.6088 (0.474		0.608868 (0.47417		1.00 (027062)	Sa	97%		3.732782 1.679166	2		
	04/12/06	RA-228	Α	1.272777 (0.468304)		2.0666 (7.367		0.6973 (0.255		0.697356 (0.25553		1.00 (015624)		97%		1.949610			
	04/12/06	RA-228	R	4.911846 (4.330805)	U4	1.3750		2.6912 (2.367		2.691205		1.00 0.027062)		97%		0.87702 18.91676 8.495346			
q	Status Method	Matrix	Protoc	ol Equation Set	Wr	k Ord	Units/	Matrix C	C/BE	Sa/On Date	AnalysisD:	ate/PptWt	Sep1/	/Sep2 Date	QC/Trace	Vial Mult/Ent\	/Id Total/Analy	Vol Final/C	ount Vo
	Calc TF / 03,P 0515	AIR	*STLE	Ra228WoBS ,J6B270158			PCI/S.	A	02.	/05/06 08:40	04/12/06 30.3	06:42		3/06 11:40 1/06 09:57	RATA21 RATA21	•	1.00 S 6 0.251007 S		<u>-</u>
Sq	Cnt Date	Parameter	San	iple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd		Abr
)	04/11/06 14:19	RA-228	187 50	280 400	G	PC1D	1	N Y		5.3202E-01 (1.369E-02)	1.0000E+00 (0.000E+00)	N	82% 7%	N			4.5045E-01	1.0190E+0	
	04/11/06 15:14	RA-228	159 5 0	280 400	G	PC1D	1	N Y			1.0000E+00 (0.000E+00)	N	82% 7%	N		1.7389E+00 (0.000E+00)	4.5045E-01	1.0190E+0	0
	04/11/06 16:10	RA-228	151 50	280 400	G	PC1D	1	N Y	N .	5.3202E-01		N	82% 7%	N		1.9291E+00 (0.000E+00)	4.5045E-01	1.0190E+0	0
	04/12/06 06:42	RA-228	132 50	256 400	G	PC1D	1	N N		5.3202E-01	1.0000E+00 (0.000E+00)	N	82% 7%	N		9.9220E+00 (0.000E+00)	4.5045E-01	1.0190E+00	0
S	q Calc Date	Parameter	Avg	Sa Act	q	Net (Ont Rt	Dpm \	No BI	•	,	Used		Yield,EnFct	Chem Yid,	EFetU IDC/ILe		1DC StdDvN	aden ee
	04/12/06	RA-228	R	19.910888 (2.713847)	77.	3.0400		10.888		10.88818 (1.34878)		1.00	Sa	82%		3.958569			
	04/12/06	RA-228	R	18.019455 (2.606271)		2.4800 (2.5564		9.8538 (1.310		9.853864 (1.31050)	s) (o	1.00 (027062.	Sa	82%		4.391482 2.000023			
	04/12/06	RA-228	R	18.700985 (2.763781)		2.3200 (2.4930		10.226 (1.3950		10.22655 (1.395051		1.00 (027062)	Sa	82%		4.871892 2.218817	2		
	04/12/06	RA-228	Α	18.877109 (1.55621)		2.6133 (1.5057		10.322		10.32286 (0.780513	3	1.00 (015624)	Sa	82%		2.544564 1.158877	ı		
				,		-	•		237	•	, (S. 7					1.150077			

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 4 RecCnt:7 RADCALC v4.8.21 IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time STL Richland

l	Batch Nbr: 606	50344		· /	Alpha	Beta	, Ra	22	28 by GF	PC , Ca	alcul	ated	Result	S		4/12	/2006 8:12:0	38 AN
q	Status Method I	Vlatrix F	ratoco! Eq	uation Set W	rk Ord	Units/Ma	atrix Q	C/BE	Sa/On Date	AnalysisDat	e/PptW1	Sep1/S	Sep2 Date	QC/Tracer	Vial Mult/EntY	d Total/Analy	Vol Final/Cou	ınt Vo
	Calc TF A 03,P 0516	iΑ		28WoBS HX8 ,J6B270158-7 v4.		PCI/SA AIR		02	/05/06 06:10	04/12/06 (30.8	06:42		/06 11:40 /06 09:57	RATA21 RATA21		1.00 S 0.250452 S		
Şq	Cnt Date	Parameter	Sample C	nt Bkgmd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent 1	31k Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
)	04/11/06 14:19	RA-228	28 50	80 400	GPC2A	1	N Y		4.2799E-01 (1.185E-02)	1.0000E+00 (0.000E+00)	N	91% 7%	N		1.5680E+00 (0.000E+00)	4,5045E-01 3.99278	1.0190E+00	
	04/11/06 15:15	RA-228	22 50	80 400	GPC2A	1	N Y	N	4.2799E-01 (1.185E-02)	1.0000E+00 (0.000E+00)	N	91% 7%	N		1.7395E+00 (0.000E+00)		1.0190E+00	
!	04/11/06 16:10	RA-228	15	80 400	GPC2A	1	N Y	N	4.2799E-01 (1.185E-02)	1,0000E+00 (0.000E+00)	N	91% 7%	N		1.9298E+00 (0.000E+00)		1.0190E+00	
ı	04/12/06 06:42	RA-228	50 10	92	GPC2A	1	N N	N	4.2799E-01 (1.185E-02)	1.0000E+00 (0.000E+00)	N	91% 7%	N			4.5045E-01	1.0190E+00	
5	iq Calc Date	Parameter	50 Avg S	400 Sa Act Q	Net (Ont Rt	Dpm 1	Wo E	•		Used		Yield,EnFct	Chem Yld	,EFctU IDC/ILc0		IDC StdDvMc	dC/Lc(
	04/12/06	RA-228	R 2.64	18467 40346)	3.6000 (1.081		1.4450		1.44505 (0.45108		1.0 027062	0 Sa	91%		2.562332 1.082438			
	04/12/06	RA-228	R 1.98	5 8799 12032)	2.4000 (9.643		1.0687 (0.438		1.06875 (0.4388)	- • •	1.0 027062	0 Sa 2)	91%		2.84264 1.200852	2		
	04/12/06	RA-228	R 0.90	05423 U (35791)	4 1.0000 (8.062)		0.4940 (0.400		0.49401) (0.4004		1.0 027 062	0 Sa 2)	91%		3.153514 1.332179			
	04/12/06	RA-228	A 1.83 (0.4	37563 (6031)	2.3333 (5.527		1.0026 (0.248		1.00260) (0.2486		1.0 015624.	0 Sa I)	91%		1.64708 0.69579			
	04/12/06	RA-228	R -1.3	198019 U 155231)	4 -3.000 (6.763		-0.762 (1.721		-0.7627) (1.7210		1.0 027062	0 Sa 2)	91%		17.2225 7.35278			
q	Status Method	Matrix	Protocol Ed	quation Set	Wrk Ord	Units/N	latrix ()C/B	B Sa/On Date	AnalysisDa	tte/PptW	it Sep1	/Sep2 Date	QC/Trace	r Vial Mult/Ent	Yid Total/Analy	/Vol Final/Co	ount V
9 536	Calc TF	AIR	'STLE Ra	228WoBS HX ,J6B270158-8 v4		PCI/S/	4	0	2/05/06 06:15	04/12/06 30.5	06:42		3/06 11: 4 0 1/06 09:57	RATA2 RATA2	1353 1 1353 Alq 106	1.00 5 % 0.249314 5		
s	q Cnt Date	Paramete	r Sample (Ont Bkgrnd Cnt	instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAc	ij Decay	Ab
0	04/11/06 14:19	RA-228	29 50	110 400	GPC2B	1	N Y	N	4.4556E-01 (1.051E-02)	1.0000E+00 (0.000E+00)	N	94% 8%	N		1.5680E+00 (0.000E+00)		1.0190E+00)
1	04/11/06 15:15	RA-228	21 50	110 400	GPC2B	1	N Y	N	4.4556E-01 (1.051E-02)	1.0000E+00 (0.000E+00)	N	94% 8%	N		1.7395E+00 (0.000E+00)		1.0190E+00)
2	04/11/06 16:10	RA-228	23 50	110 400	GPC2B	1	N Y	N	4.4556E-01 (1.051E-02)	1.0000E+00 (0.000E+00)		94% 8%	N		1.9298E+00 (0.000E+00)	4.5045E-01 4.011006	1.0 190E +00)
3	04/12/06 06:42	2 FIA-228	11 50	116 400	GPC2B	1	N N	N	4.4556E-01 (1.051E-02)			94% 8%	N		9.9322E+00 (0.000E+00)	4.5045E-01 4.011006	1.0190E+00)
					CAE . TO	t.	. •		Pac								RADCALC v4	1.8.21
() ID(Total	notion Lovel in	Consultation I	is Less Than Lc = MLcC - Method De of Each Sr-89/90 a	cicion Lava	Lin Conc I	Jnits, MI esult Digi	DC- N	/linimum Detect:	ble Concentration	on e - mm/c	ld/yy hh:mi	m, 24hr Time	•			STL Richland	I

3:12:38 A	006 8:12	4/12/20		ts	Result	ated	, Calcul	8 by GPC	a-22	a, R	a Beta	lipha	A				60344	Batch Nbr: 60
		BlkLcC/MDC	EFctU IDC/ILcC				Vol Used	•	n Wo Bl		Cnt Rt	-	Q	Act	g SaA	Av	Parameter	q Calc Date
			2.756893 1.191931	•	94%		1.00 (0.027062)	1.14446 (0.426754)	446 26754)	1.14	00E-01 85E-01)				2.1071 (0.794)	R	RA-228	04/12/06
			3.058485 1.322324		94%		1.00 (0.027062)	0.603609 (0.400015)	3609)0015)		00E-01 28E-02)	1.4500 (9.532	U4		1.1113 (0.739	A	RA-228	04/12/06
			3.392964 1.466934		94%		1.00 (0.027062)	0.854343 (0.464698)	4343 34698)		00E-01 36E-02)				1.5729 (0.860)	R	RA-228	04/12/06
			1.772146 0.76618		94%		1.00	0.867471 (0.249015)	7471 19015)		67E-01 37E-02)				1.5971	Α	RA-228	04/12/06
			17.86914 1 7.753247		94%	Sa	1.00 (0.027062)	-1.663791 (1.70721)	3791 721)		000E-02 89E-02)		U4	28	-3.063 (3.148)	R	RA-228	04/12/06
al/Count V	I Final/C	Total/Analy Vol	Vial Mult/EntYlo	QC/Tracer Via	Sep2 Date	Sept	nalysisDate/PptWt	Sa/On Date	QC/BB	Matrix	Units/	k Ord	Wi	tion Set	ol Equal	Protoc	Matrix P	Status Method
***************************************		1 00 Sa 0.248015 Sa		RATA21354 RATA21354	/06 11:40 /06 09:57		4/12/06 06:42 1.0	05/06 06:05	02/	Α	PCI/S AIR			8WoBS 6B270158	E Ra228	*STLi	AIR *	Calc TF / 03,000357
Abr	ecay	nv Fct/VolAdij De	Ingr Fct C	Bik Value	Ent I	Yld Fct	eiency 2 Ent	Efficiency1 E	v Ent	Trc/A	Geom	Instr	Cnt	Bkgrnd	mple Cnt	Sar	Parameter	Cnt Date
+00	0190E+00	· · · · · · · · · · · · · · · ·	1.5680E+00 4 (0.000E+00) 4		N	57% 5%	00E+00 N 0E+00)			N Y	1	3PC2C	(102 400		33 50	RA-228	04/11/06 14:19
i+00	0190E+00	5 045E -01 1.0	1.7395E+00 4 (0.000E+00) 4	1	N	57% 5%	00E+00 N 0E+00)			N Y	1	3PC2C	(102 400		32 50	RA-228	04/11/06 15:15
+00	0190 E +0(_	1.9298E+00 4 (0.000E+00) 4		N	57% 5%	00E+00 N 0E+00)			N Y	1	3PC2C	(102 400		27 50	RA-228	04/11/06 16:10
+00	0190E+00		9.9322E+00 (0.000E+00)		N	57% 5%	00E+00 N 0E+00)			N N	1	3PC2C	(97 400		17 50	RA-228	04/12/06 06:42
DvMdC/Lc(StdDvil	BikLcC/MDC	EFetU IDC/ILeC	Chem Yld,EF	Yield,EnFct		Vol Used	Dpm-Blk	wo Bl	Dp	Cnt Rt	Net	Q	Act	g SaA	Avg	Parameter	q Calc Date
			4.405686 1.894878		57%		1.00 (0.027062)	2.495818 (0.753866)	5818 53866)		00E-01 33E-01)				4.6192 (1.419)	R	RA-228	04/12/06
			4.887649 2.10217		57%		1.00 (0.027062)	2.632116 (0.822001)	2116 22001)		00E-01 92E-01)				4.8714 (1.546:	R	RA-228	04/12/06
			5.422168 2.332066		57%		1.00 (0.027062)	2.161534 (0.830675)	1534 80675)		00E-01 95E-01)				4.0005 (1.554	R	RA-228	04/12/06
			2.832 1.218039		57%		1.00 (0.015624)	2.429823 (0.463564)	9823 3564)		33E-01 35E-02)				4.4970 (0.870	Α	RA-228	04/12/06

RADCALC v4.8.21

STL Richland

RecCnt:10

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 6
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

	Batch Nbr:	5060344			Alpha	Beta	ı, Ra	-2	28 by GI	PC , C	alcu	lated	Resul	ts		4/12	2/2006 8:12:	:38 AI
Sq	Status Method	i Matrix	Protoco	Equation Set	Wrk Ord	Units/N	fatrix C	C/B	B Sa/On Date	AnalysisDa	te/PptW	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	Vol Final/Co	ount Va
	Catc TF 403,000358	AIR	*STLE	Ra228WoBS H ,J6B270158-10		PCI/S/ AIR	٩	02	2/05/06 06:40	04/12/06 30.8	06:42		06 11:40 06 09:57	RATA21: RATA21:	•	1.00 S 0.250499 S		<u></u>
S	Cnt Date	Paramete	r Samp	ple Cnt Bkgrnd Cr	nt Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/11/06 14:	19 RA-228	25 50	77 400	GPC2D	1	N Y	N	4.3813E-01 (1.310E-02)	1.0000E+00 (0.000E+00)	N	88% 7%	N		1.5680E+00 (0.000E+00)		1.0190E+00	
1	04/11/06 15:	15 RA-228	13 50	77 400	GPC2D	1	N Y	N	4.3813E-01 (1.310E-02)	1.0000E+00 (0.000E+00)	N	88% 7%	N		1.7395E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
2	04/11/06 16:	10 RA-228	24 50	77 400	GPC2D	1	N Y	N	4.3813E-01 (1.310E-02)	1.0000E+00 (0.000E+00)	N	88% 7%	N		1.9298E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
3	04/12/06 06:4	12 RA-228	1 7 50	96 400	GPC2D	1	N	N		1.0000E+00 (0.000E+00)	N	88% 7%	N		9.9322E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
5	Sq Calc Date	Parameter	Avg	Sa Act	Q Net	Ont Rt	Dpm \	Vo E	•	,	Used	1	Yield,EnFc	Chem Yid,	EFctU IDC/ILe(IDC StdDvMd	dC/Lc(
	04/12/06	RA-228		2.285646 (0.796286)	3.0750 (1.023	BE-01)	1.2473		1.24733) (0.42872		1.0 027062	0 Sa	88%		2.547472 1.072939	?		
	04/12/06	RA-228		0.556614 (0.624162)	U4 6.7500 (7.537		0.3037 (0.340		0.30375 (0.34018		1.0 027062.	0 Sa ()	88%		2.826155 1.190314			
	04/12/06	RA-228		2.630032 (0.957316)	2.8750 (1.004		1.4352 (0.516		1.43527;) (0.51601	~)	1.0 027062	O Sa	88%		3.135226 1.320488			
	04/12/06	RA-228	Α	1.824097 (0.464292)	2.2083 (5.400)		0.9954 (0.250)		0.99545) (0.25073	4) Sa	88%		1.63753			
	04/12/06	RA-228	R		U4 1.0000 (8.602)	0E-01	2.5694 (2.221	29	2.56942	9) Sa	88%		0.689691 17.7202 7.588659			
Sq	Status Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/N	latrix Q	С/В	B Sa/On Date	AnalysisDa		,	ep2 Date	QC/Tracer	Vial Mult/EntY		Vol Final/Co	ount Vc
	Calc TF 103,000359	AIR	*STLE	Ra228WoBS H ,J6B270158-11		PCI/S/ AIR	4	02	2/05/06 07:20	04/12/06 25.1	06:43		06 11:40 06 09:57	RATA21:	· ·	1.00 S 6 0.249764 S		Production and publishing to the second
Sc	Cnt Date	Parametei	r Samp	ole Cnt Bkgrnd Cr	nt Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj		Abn
0	04/11/06 14:2	0 RA-228	29 50	84 400	GPC3A	1	N Y	N	4.6800E-01 (1.324E-02)	1.0000E+00 (0.000E+00)	N	81% 6%	N	· · · · · · · · · · · · · · · · · · ·	1.5687E+00 (0.000E+00)		1.0190E+00	
1	04/11/06 15:1	5 RA-228	18 50	84 4 00	GPC3A	1	N Y	N	4.6800E-01 (1.324E-02)	1.0000E+00 (0.000E+00)	N	81% 6%	Ν		1.7403E+00 (0.000E+00)		1.0190E+00	
2	04/11/06 16:1	0 RA-228	25 50	84 400	GPC3A	1	N Y	N	4.6800E-01	1.0000E+00 (0.000E+00)	N	81% 6%	N		1.9307E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
3	04/12/06 06:4	3 RA-228	28 50	138 400	GPC3B	1		N	4.7930E-01		N	81% 6%	N		9.9444E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
) DC	→ Instrument De	tection Level in C	Conc Units	ult is Less Than Lc = s, MLcC - Method D on of Each Sr-89/90 :	ecision Level i	n Conc U	nits, MD0	 С- М	Page inimum Detectat	de Concentration			·		RecC	int:11 R	ADCALC v4.t	8.21

	Batch Nbr: 60	60344			Α	lpha	Beta	ı, Ra	1-22	28 by GF	PC, C	Calcul	lated	Result	S		4/12	/2006 8:12:0	39 A
S	q Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm	Wo B	ik Dpm-B	lk Vo	l Used		Yield,EnFct	Chem Yld,EF	FotU IDC/ILcC	BlkLcC/MI	DC StdDvMd	IC/Le
	04/12/06	RA-228	R	2.811406		3.7000		1.529		1.529766		1.00		81%		2.701643			
			_	(0.884595)		(1.1011	,	(0.473		•	1) ((0.027062	•			1.145585			
	04/12/06	RA-228	Ħ	1.264444 (0.752069)		1.5000		0.688		0.68802 (0.40734)	9) ((1.00 0.027062) Sa)	81%		2.997191 1.270907			
	04/12/06	RA-228	R	2.71202		2.9000 (1.0259		1.475		1.475688		1.00 0.027062) Sa	81%		3.325071 1.409939			
	04/12/06	RA-228	Α	(0.998605) 2,262623		2.7000		1.231	,	1.231158	,) OSa	81%		1.736651			
				(0.510482)		(5.809	5E-02)	(0.274	4522)	(0.27452	2) (0.015624)			0.736397			
	04/12/06	RA-228	R	10.112029 (5.265939)		2.1500 (1.0983		5.502 (2.848		5.502245 (2.84822		1.00 0.027062) Sa)	81%		20.71592 9.088774			
q	Status Method	Matrix F	rotoc	ol Equation Set	Wr	k Ord	Units/I	Matrix (QC/BI	B Sa/On Date	Analysis	Date/PptW	t Şep1	/Sep2 Date	QC/Tracer V	/iai Mult/EntY	Id Total/Analy	Vol Final/Co	unt \
	Calc TF ,	AIR	*STLE	Ra228WoBS J6B270158			PCI/S	A	02	2/05/06 07:50	04/12/0 27.3	6 06:43		3/06 11:40 1/06 09:57	RATA2135		1.00 Sa 9.251513 S a		
	cnt Date	Parameter	Sam	nple Cnt Bkgrnd			Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	ent	Yld Fct		3lk Value	Ingr Fct	Conv Fct/VolAdj		At
)	04/11/06 14:20	RA-228	29	93		PC3B		N		4.7930E-01	1.0000E+00) N	82%	N		1.5687E+00	_	1.0190E+00	
			50	400				Υ		(1.181E-02)	(0.000E+00))	7%			(0.000E+00)	3.975941		
	04/11/06 15:15	RA-228	20 50	93 400	G	арсзв	1	N Y	N		1.0000E+00		82% 7%	N		1.7403E+00 (0.000E+00)		1.0190E+00	
2	04/11/06 16:10	RA-228	21 50	93 400	G	ЭРСЗВ	1	N Y	N	4.7930E-01	1.0000E+00 (0.000E+00	N C	82% 7%	N			4.5045E-01	1.019 0 E+00	
3	04/12/06 06:43	RA-228	20	118	C	GPC3C	1	N	N	4.7587E-01	1.0000E+0) N	82%	N		9.9444E+00	4.5045E-01	1.0190E+00	
	Cala Data	Dt	50	400	_	Mossi	Cat Dt	N	Wo E		(0.000E+00)) ol Used	7%	Viald EnEat		(0.000E+00) FetU IDC/ILet		DC StdDvMd	400
	04/12/06	Parameter FIA-228	Avg	2.518244	_ Q	3,4750	Ont Rt	1.379		3lk Dpm-E 1.379852			0 Sa	82%	Chem Hu,c	2.690627		DC SIGDAMIC	
	04/12/00	NA-228	.,	(0.839424)		(1.103		(0.45				0.027062		G2 /6		1.14961			
	04/12/06	RA-228	R	1.346618 (0.757103)		1.6750 (9.263		0.737 (0.41		0.737869) (0.41272	_,	1.0 0.027062	0 Sa 2)	82%		2.98497 ⁻ 1.275372			
	04/12/06	RA-228	R	1.672312 (0.862021)		1.8750 (9.476		0.916		0.91633 (0.46945	6)	1.0 0.027062	0 Sa 2)	82%		3,311514 1,41489			
	04/12/06	RA-228	Α	1.845725 (0.473863)		2.3416 (5.748	7E-01	1.011 (0.25		1.01135 (0.25736			0 Sa	82%		1.72957 0.73898			
	04/12/06	RA-228	R	4.858385	U4	1.0500	•	2.662		2.662114	,	•	0 Sa	82%		19.0343			
	- · · · - · · ·			(4.352785)			5E-02)	(2.38				0.027062				8.26817			
		-) 6 = ==						<u> </u>		Page	. R					Roof	Ont:13 F	IADCALC v4.	82
١.				esult is Less Than t nits - ML cC - Metho						_						Heck		TI Diabland	ے. ت

DIC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

	Batch Nbr: 60	60344			Alpha	Beta	, Ra	-22	28 by GI	C , C	alcu	lated	Resul	ts		4/12	/2006 8:12:	39 AN
Sq	Status Method	Matrix i	Protocol	Equation Set V	Vrk Ord	Units/M	atrix (QC/BE	3 Sa/On Date	AnalysisDa	ite/PptW	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	Vol Final/Cou	ınt Vol
	Calc TF 03,000361	AIR	*STLE	Ra228WoBS HX 8 ,J6B270158-13 v		PCI/SA AIR	1	02	/05/06 08:20	04/12/06 30.4	06:43		06 11:40 06 09:57	RATA21:		1.00 Sa 0.248297 Sa		
S	Cnt Date	Parameter	Sampl	e Cnt Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/11/06 14:20	RA-228	178 50	96 400	GPC3C	1	N Y	N	4.7122E-01 (1.101E-02)	1.0000E+00 (0.000E+00)	N	101% 8%	N		1.5687E+00 (0.000E+00)		1.0190E+00	
1	04/11/06 15:15	RA-228	190 50	96 400	GPC3C	1	N Y	N	4.7122E-01 (1.101E-02)	1.0000E+00 (0.000E+00)	N	101% 8%	N		1.7403E+00 (0.000E+00)		1.0190E+00	
2	04/11/06 16:10	RA-228	146 50	96 400	GPC3C	1	N Y	N	4.7122E-01 (1.101E-02)	1.0000E+00 (0.000E+00)	N	101% 8%	N		1.9307E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
3	04/12/06 06:43	B RA-228	131 50	105 400	GPC3D	1	N N	N	4.6803E-01 (1.145E-02)	1.0000E+00 (0.000E+00)	N	101% 8%	N		9.9444E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
	iq Calc Date	Parameter		Sa Act Q	Net (Ont Rt	Dpm	Wo E			Used	,	Yield,EnFct	Chem Yld,	EFctU IDC/ILc0		IDC StdDvMd	iC/LcC
	04/12/06	RA-228		0.431478 2.639701)	3.3200 (2.679)		11.05 (1.282				1.0 .027062	0 Sa 2)	101%	-	2.316151 0.991889			
	04/12/06	RA-228		.4.305145 3.09565)	3.5600 (2.767)		13.14 (1.498				1.0 027062.	0 Sa 2)	101%		2.569528 1.100398			
	04/12/06	RA-228	_	:0.298761 2.752902)	2.6800 (2.429		10.98 (1.35				1.0 027062.	0 Sa 2)	101%		2.850624 1.220777			
	04/12/06	RA-228		1.678461 1.637394)	3.1866 (1.5186		11.72 (0.797				1.0 015624.	00 Sa 4)	101%		1.488852 0.637599			
	04/12/06	RA-228)2.59967 13.02249)	2.3575 (2.303		50.09 (6.44)				1.0 027062.	90 Sa 2)	101%		15.36288 6.620919			
Sq	Status Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/M	latrix (QC/B	B Sa/On Date	AnalysisDi	ate/PptW	/t Sep1/S	Sep2 Date	QC/Trace	Vial Mult/Ent	fld Total/Analy	Vol Final/Co	unt Vo
1	Calc TF 403,000362	AIR	*STLE	Ra228WoBS HX ,J6B270158-14 v		PCI/S/ AIR	1	02	2/05/06 08:45	04/12/06 24.6	06:43		06 11:40 06 09:57	RATA21 RATA21	•	1.00 S 6 _ 0.249267 S		
s	Cnt Date	Parameter	Sampl	le Cnt Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/11/06 14:20	RA-228	18 50	106 400	GPC3D	1	N Y	N	4.7303E-01 (1.158E-02)	1.0000E+00 (0.000E+00)	N	69% 5%	N		1.5687E+00 (0.000E+00)		1.0190E+00	
1	04/11/06 15:15	5 RA-228	12 50	106 400	GPC3D	1	N Y	N	4.7303E-01 (1.158E-02)	1.0000E+00 (0.000E+00)	N	69% 5%	N		1.7403E+00 (0.000E+00)		1.0190E+00	
2	04/11/06 16:10	RA-228	10 50	106 4 00	GPC3D	1	N Y	N	4.7303E-01 (1.158E-02)	1.0000E+00 (0.000E+00)	N	69% 5%	N		1.9307E+00 (0.000E+00)	4.5045E-01 4.011757	1.0190E+00	
3	04/12/06 06:40	3 RA-228	24 50	147 400	GPC4A	1	N N	N	4.8160E-01 (1.103E-02)	1.0000E+00 (0.000E+00)	-	69% 5%	N			4.5045 E -01	1.0190E+00	
				ek mod medd moe Ynklone cann can o														
	- Instrument Det	ection Level in C	Conc Units	ilt is Less Than Lc = 1 i, MLcC - Method Dec n of Each Sr-89/90 ar	cision Level	in Conc U				ble Concentratio		d/yy hh:mm,	, 24hr Time		Rect		RADCALC v4. STL Richland	8.21

E	Batch Nbr: 60	60344			ΑI	pha E	3eta	, Ra	-22	28 by GP	С,(Calcula	ated	Result	S		4/12	/2006 8:12	2:39 AN
S	q Caic Date	Parameter	Avg	Sa Act	Q	Net Cn	t Rt	Dpm V	√o Bl	lk Dpm-Bil	c Vo	l Used		Yleld,EnFct	Chem Yld,EF	etU IDC/ILeC	BIkLcC/MI	DC StdDvM	IdC/LcC
	04/12/06	RA-228	R	0.845123 (0.793436)		9.50000I (8.8671E		0.4589		0.45895 (0.43009)	((1.00 0.027062)	Sa	69%		3.493695 1.50666			
	04/12/06	RA-228	R	-0.246731 (0.729848)		-2.50000 (7.39 0 9E		-0.1339 (0.3962		-0.133989 (0.396276		1.00 (0.027062)	Sa	69%		3.875891 1.671482			
	04/12/06	RA-228	R	-0.711677 (0.751074)		-6.50000 (6.8283E		-0.3864 (0.407)		-0.386481 (0.407284) (1.00 (0.027062)	Sa	69%		4.299897 1.854335			
	04/12/06	RA-228	Α	-0.037761 (0.437966)		1.66667 (4.4706E		-0.0205 (0.2375		-0.020507 (0.237555		1.00 (0.015624	Sa	69%		2.245793 0.968501			
	04/12/06	RA-228	R	6.234854 (5.718649)		1.12500 (1.0256E		3.3858 (3.099		3.385882 (3.099581) (1.00 (0.027062	Sa	69%		25.09761 11.05346			
3q	Status Method	Matrix P	rotoco	el Equation Set	Wrk	Ord	Units/N	latrix Q	C/BE	3 Sa/On Date	Analysist	Date/PptWt	Sep1	/Sep2 Date	QC/Tracer V	ial Mult/EntY	ld Total/Analy	Vol Final/C	Count Vo
	Calc TF ,	AIR *	STLE	Ra228WoBS ,J68270158-			PCI/S/ AIR	4	02	/05/06 06:45	04/12/0 30.8	6 06:43		3/06 11:40 1/06 09: 57	RATA2136 RATA2136	•	1.00 Sa 6 . 0.250936 Sa		
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	Cnt I	nstr	Geom	Trc/Av	Ent	Efficiency1	Efficiency	2 Ent	Yld Fet	Ent i	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
D	04/11/06 14:20	RA-228	19 50	103 359	G	PC4A	1	N Y	N		1.0000E+00 (0.000E+00	_	94% 7%	N		1.5692E+00 (0.000E+00)	4.5045E-01 3.985085	1.0190E+0	0
1	04/11/06 15:15	RA-228	17 50	103 359	G	PC4A	1	N Y	N		1.0000E+0		94% 7%	N		1.7408E+00 (0.000E+00)		1.0190E+0	0
2	04/11/06 16:10	RA-228	20 50	103 359	G	PC4A	1	N Y			1.0000E+0		94% 7%	N		1.9312E+00 (0.000E+00)		1.0190E+0	O
3	04/12/06 06:43	B RA-228	10 50	122 400	G	PC4B	1	N N	N	4.6215E-01	1.0000E+0 (0.000E+0(94% 7%	N			4.5045E-01	1.0190E+0	10
s	q Çalc Date	Parameter	Avg		Q	Net C	nt Rt	Dpm 1			•	ol Used	•	Yleld,EnFct		FetU IDC/ILc(DC StdDvI	MdC/Lc0
	04/12/06	RA-228	R	0.592327 (0.586181)	Ų4	9.30919 (9.1647		0.3238		0.323811) (0.319922	2)	1.00 (0.027062)		94%		2.586108 1.121287			
	04/12/06	PA-228	R	0.37477 (0.616504)	U4	5.30919 (8.7173		0.2048 (0.336		0.204878) (0.33682		1.00 (0.027062)		94%		2.869017 1. 24 3951			
	04/12/06	RA-228	R	0.885606 (0.739967)	U4	1.13092 (9.3804		0.484° (0.403		0.48414) (0.40358	5)	1.00 (0.027062)		94%		3.182776 1.37999			
	04/12/06	RA-228	Α	0.617568 (0.375831)	U4	8.64253 (5.2491		0.3376 (0.205		0.33761) (0.20512	1)	1.00 (0.015624)		94%		1.662368 0.72077	5		
	04/12/06	RA-228	R	-4.414494 (2.935287)	U4	-1.0500 (6.9011		-2.413 (1.598				1.00 (0.027062 <u>)</u>		94%		17.54768 7.639016			
<u></u>	- (1s Uncertainiti	ies), Q - Qualifie	er. U Pr	esult is Less Than L	c = 1.64	45 ° TPU	· · · · · · · · · · · · · · · · · ·	J., J		Page					NAMES OF THE PERSON OF THE PER	Rec	Ont:16 F	RADCALC V	/4.8.21

	Batch Nbr: 6	060344			Α	ipha	Beta	, Ra	1-2	28 by G	PC , C	alcu	lated	Resul	ts	***************************************	4/1	2/2006 8:12:	39 AI
q	Status Method	Matrix	Protoco	l Equation Set	Wri	c Ord	Units/M	atrix (эс/в	B Sa/On Date	AnalysisDa	ite/PptW	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	/Vol Final/Co	unt Vo
	Calc TF TRA-LAB BLANK	AIR	*STLE	Ra228WoBS ,J6C010000		CIAA	PCI/SA AIR	L B	02	2/05/06 06:00	04/12/06 30.4	06:43		06 11:40 06 09:57	RATA21 RATA21	•	1.00 \$		
S	q Cnt Date	Parameter	Samp	ole Cnt Bkgrnd (Cnt	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
)	04/11/06 14:20) RA-228	19 50	115 359	G	PC4B	1	N Y	N	4.6227E-01 (1.048E-02)	1.0000E+00 (0.000E+00)	N	99% 8%	N	THE CONTROL OF THE MARTIN CONTROL OF THE CONTROL	1.5692E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
	04/11/06 15:1	5 RA-228	15 50	115 359	G	iPC4B	1	N Y	N	4.6227E-01 (1.048E-02)	1.0000E+00 (0.000E+00)	N	99% 8%	N		1.7408E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
2	04/11/06 16:10) RA-228	22 50	115 359	G	iPC4B	1	N Y	N	4.6227E-01 (1.048E-02)	1.0000E+00 (0.000E+00)	N	99% 8%	N		1.9312E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
3	04/12/06 06:4	3 RA-228	19 50	115 400	G	PC4C	1	N N	N	4.6870E-01 (1.147E-02)	1.0000E+00 (0.000E+00)	N	99% 8%	N		9.9497E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
:	Sq Calc Date	Parameter		Sa Act	Q	Net (Ont Rt	Dpm	Wo E		,	Used		Yield,EnFc	t Chem Yid.	EFctU IDC/ILc0		MDC StdDvMc	dC/LeC
	04/12/06	RA-228		0.093906 (0.145333)	U4	5.9665 (9.2154		0.204		0.20457) (0.31642		1.00 017321	OSa)	99%		0.671089 0.293067)		
	04/12/06	RA-228		-0.035505 (0.144999)	U4	-2.0334 (8.3020		-0.077 (0.315				1.00 017321.	OSa)	99%		0.744503 0.325127			
	04/12/06	RA-228		0.231792 (0.192059)	U4	1.1966 (9.8449		0.5049 (0.417		0.50496) (0.41755	·	1.00 017321.) Sa)	99%		0.825923 0.360683			
	04/12/06	RA-228		0.096731 (0.093709)	U4	5.2999 (5.2 7 86		0.210		0.21073) (0.20391		1.00 (0.01) Sa)	99%		0.43138 0.188385	;		
	04/12/06	RA-228		0.91042 (0.902209)	U4	9.2500 (9.120)		1.9833 (1.962		1.98337) (1.96268		1.00 017321.) Sa	99%		4.003918 1.736261			
Sq	Status Method	Matrix	Protocol	Equation Set	Wrl	c Ord	Units/M	atrix C	C/BI	B Sa/On Date	AnalysisDa	ite/PptW	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Anal	y Vol Final/Co	unt Vo
	Calc TF TRA-LAB CHECK		*STLE	Ra228WoBS ,J6C010000	H0ER 0-344	C1AC	PCI/SA AIR	S	02	2/05/06 06:00	04/12/06 29.5	07:54		06 11:40 06 09:57	RASC40	-	1.00 \$		
S	q Cnt Date	Parameter	Samp	ole Cnt Bkgrnd (Cnt I	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAc	ij Decay	Abn
)	04/11/06 14:20) RA-228	1 3 5 50	91 359	G	PC4C	1	N Y	N	4.6870E-01 (1.147E-02)	1.0000E+00 (0.000E+00)	N	86% 7%	N		1.5692E+00 (0.000E+00)		1.0190E+00	
	04/11/06 15:19	5 RA-228	108 50	91 359	G	PC4C	1	N Y		4.6870E-01 (1.147E-02)	1.0000E+00 (0.000E+00)	N	86% 7%	N		1.7408E+00 (0.000E+00)		1.0190E+00	
	04/11/06 16:10	RA-228	92 50	91 359	G	PC4C	1	N Y	N	4.6870E-01 (1.147E-02)	1.0000E+00 (0.000E+00)	N	86% 7%	N		1.9312E+00 (0.000E+00)	4.5045E-01	1.0190E+00	
	04/12/06 07:54	FA-228	54 50	302 400	G	PC7A	1	N N	N	5.2130E-01 (1.205E-02)		N	86% 7%	N		1.1375E+01 (0.000E+00)		1.0190E+00	
)C	- Instrument Dete	ection Level in C	one Unit	ult is Less Than Lo s, MLcC - Method on of Each Sr-89/9	Decisio	an Level i	n Conc Ui	nits, MD sult Digit	IC- M s May	Page inimum Detectal y Not be Signific	ole Concentration	n : - mm/dd	/yy hh:mm,	24hr Time	Park Affin Canada Administration and an arrangement of the second	RecC		RADCALC v4.i	8.21

Ba	tch Nbr: 60	60344			Α	Ipha Beta	i, Ra-228	by GPC	, Calculate	d Result	ts		4/12/20	06 8:12:40 AN
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EF	etU IDC/ILeC	BlkLcC/MDC	StdDvMdC/LcC
	04/12/06	RA-228	R	4.368569 (0.6012)		2.44652E+00 (2.3389E-01)	9.517062 (1.209046)	9.517062 (1.209046)	1.00 Sa (0.017321)	86%	86%	0.687978 0.295774		
	04/12/06	RA-228	R	3.77675 (0.558635)		1.90652E+00 (2.0954E-01)	8.227766 (1.136463)	8.227766 (1.136463)	1.00 Sa (0.017321)	86%	74%	0.76324 0.328131		
	04/12/06	RA-228	R	3.486544 (0.547955)		1.58652E+00 (1.9366E-01)	7.595545 (1.124042)	7.595545 (1.124042)	1.00 Sa (0.017321)	86%	69%	0.846709 0.364015		
	04/12/06	RA-228	Α	3.877288 (0.328932)		1.97985E+00 (1.2298E-01)	8.446791 (0.668066)	8.446791 (0.668066)	1.00 Sa (0.01)	86%	76%	0.442236 0.190125		
	04/12/06	RA-228	R	3.782399 (1.822241)		3.25000E-01 (1.5326E-01)	8,240073 (3.94579)	8.240073 (3.94579)	1.00 Sa (0.017321)	86%	74%	7.280845 3.327004		

RecCnt:17

RADCALC v4.8.21

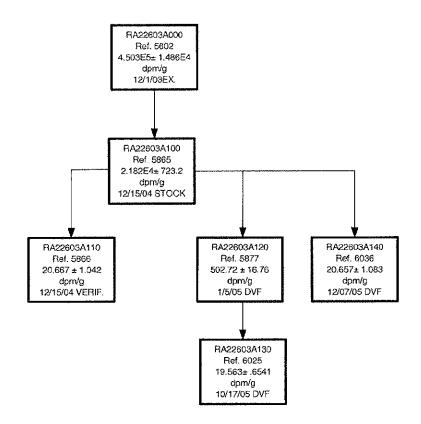
STL Richland

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 12
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RADIUM 228 STANDARDS AND TRACEABILITY

ial Identifier		it Prep Activity			Std Wt U								entration
	Parent St	andard: RA22	603A140	Ref:	12/15/200	14	2.0657E+	-01 ±	5.242	E+00 E	PM/G		
ASC4036	RA-226	3.0329E+00	± 7.696E-01	DPM	0.1469	g	3/13/2006	3/13/	/2006	Armstron	2.0646E+01	±5.239E+00	DPM/
		3,0329E+0	00 ± 3.033E+0	00 (1)			3.0329E-	+000 ,	3.032	9E+000			

RA22603A000



RA22603A

ISOTOPE DILUTION RECORD

1) Prepared by tda	2) Date Prepared	12/7/2005
3) Source Identification Number / Ref. Number	RA22603A100	5865
4) Source Activity (dpm ± dpm/g)	2.1810E+04 ±	7.229E+02
5) Percent error of Source Activity	3.314 %	
6) Weight of Source Material used (g)	0.1184	
7) (% Error) of Weight of Source Material used	4.0541 %	
8) Diluent	1 M HCL	
9) Total Weight of the Dilution (g)	125.01	
10) (% Error) of Total Weight of the Dilution	0.2400 %	
11) Specific Activity of Diluted Solution dpm/g	2.0657E+01 ±	1.083E+00
12) Total Uncertainty	5.242 %	
13) Dilution Identification Number / Ref. Number	RA22603A140	6036
14) Calibration Reference Date	12/7/2005	
15) Isotope Inventory File update by/date	tda	12/7/2005
16) Reviewed by/date	SEW	1/17/2006
17) Location	18) Exhausted	
**************************************	**********	
CALCULATIONS	;	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	/ Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + ?	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3





1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 • U.S.A.

Phone (404) 352-8677 Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

67269-310

Ra-226 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

Analytics maintains traceability to the National Institute of Standards and Technology through participation in a Measurements Assurance Program as described in USNRC Reg. Guide 4.15, Revision 1, February 1979.

ISOTOPE:

Ra-226

ACTIVITY (dps):

3.753 E4

HALF-LIFE:

1.600 E3 years

CALIBRATION DATE:

December 1, 2003 12:00 EST

RELATIVE EXPANDED

UNCERTAINTY (k=2):

3.3%

Impurities: γ-impurities <0.1% (other than decay products)

5.00107 grams 0.1M HCl solution with 50 $\mu g/g$ Ba carrier.

Master solution ID#: P8V83.

P O NUMBER 2036005/300260, Item 1

SOURCE PREPARED BY:

Maskaeve

M. Taskaeva, Radiochemist

O A APPROVED:

M. Mt 3 12-4-03

ISOTOPE RECORD FORM

1) Isotope	Ra-226	2) Reference Number	5601
3) Half Life _	1600 yrs.	4) Storage Location	STLB
5) Source Ide	ntification Number_	Ra22603	A000
*************	**************************************	:*************************************	*********
6) Activity as R	eceived Units	3.753E4	dps
7) Overall Unce	ertainty Percent	3.3%	6
8) Reference D	ate / Time	12/1/03 12:00 E	ST (9:00AM)
9) Activity dpr	m/g	4.5026E5 ± 148	359E4 dpm/g
10) Volume or N	Mass (ml/g)	5.0010	07g
11) Calibrated b	py	ANALY	TICS
12) Certificate S	Solution Number	67269-	310
******	*********	**************************************	************
13) Date Recei	ved .	1	2/8/2003
14) Surveyêd b			W.G
	nding (Beta/Gamma)	cpm	<1K
16) Survey Rea	nding (Alpha) cpm		<bkg< td=""></bkg<>
********	*******	***************	*****
17) Activity Cor	aversion <u>3.753E+</u>	4dpsx60s/m/5.00107g= 4.503	E+5 ± 1.49E+04 dpm/g
18) Remarks			
19) Isotope File	Updated by	WG.12/11/03	3
20) QC Approv	ed	JE 12/1	6/03

RA22603C000

RA22603A000 Ref. 5602 4.503E5± 1.486E4 dpm/g 12/1/03

Standard Materials 12/11/2003 7:58:06 AM Std Rec: 7/25/76 to 12/12/03,SMIdetifier Like: RA22603A000%, *All Suppliers , Excluding Consumed Std ,Order by SMIdentifier Supplier Id and Lot Ref Date Rec Date Store Loc Supplier SM Identifier2 Quantity Density SM Identifier 12/8/2003 12/1/2003 67269-310 PM ANAL (L) 5.00107 g RA22603A000 5602 Decayed Activity: 4.5026E+05 ±1.486E+04 4.5026E+05 ± 1.486E+04 DPM/G RA-226 Total Activity: 2.2518E+006 DPM

STL Richland, Standard Materials v4.710

Page 1

Record Count: 1

SEVERO STL

ISOTOPE RECORD FORM

1) Isotope	2) Reference Number # 5602
3) Half Life 1.600 × 103 yrs	4) Storage Location <u>QC Lab</u>
5) Source Identification Number	R922603 A000
**********	CALIBRATION DATA
6) Activity as Received Units	3.753E4 Sps
7) Overall Uncertainty Percent	3,3%
8) Reference Date / Time / 2/	1/03 12:00 EST (9:00 Am)
9) Activity dpm/g	.5026×105 ± 1,4859 ×104 dpm/g
10) Volume or Mass (mL /(g))	5.00107g
11) Calibrated by	Anglytics
12) Certificate Solution Number	67269-310
** * * * * * * * * * * * * * * * * * * *	**************************************
13) Date Received	12/8/3
14) Surveyed by	W
15) Survey reading (Beta/Gamma) cpm	LIK
16) Survey Reading (Alpha) cpm	< OKG
17) Activity Conversion 37530,	0 dps x 605/m /5,00107g =
450263.6436 ±	14858.70024 dpm/g
18) Remarks	
19) Isotope File Updated by	VB 12/11/3
20) QC Approved	



Rec'd 12/8/312

1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318-U.S.A

Phone (404) 352-8677 Fax (404) 352-2837 emait: analytics@mindspring.com www.analyticsinc.com

SHIPPER'	S DECLARATION
Shipment number 20736-11747 co	ntains the following isotopes:
FORM: LIQUID	
RADIONUCLIDE Ra-226	QUANTITY IN MICROCURIES* 1.01
TOTAL:	1.01
This package conforms to the 49 CFR 173.421 for radioact quantity of material, UN2910.	conditions and limitations specified in ive material, excepted package-limited
SHIPPED TO: SEVERN TRENT LABS	
DATE: 12.4.03 TE 1CASAL	
	eximate and for shipping purposes ies see Certificate of Calibration



1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318-U.S.A.

Phone (404) 352-8677 Fax (404) 352-2837 email: analytics@mindspring.com www.analyticsinc.com

PACKING LIST

SEVERN TRENT LABORATORIES

STL RICHLAND

2800 GEORGE WASHINGTON WAY

RICHLAND

ATTN:

FOR:

01

QTY LINE

NUMBER SHIP

WA 99352-1613

SHIPMENT NO. P. O. NUMBER

SHIPPING DATE

ORDER #

12.4.03 20736-11747

011747

2036005/300260

REQ/RELEASE NO.

DESCRIPTION

BOX 1 OF 1

SRS 67269-310 RA-226 5 ML LIQUID IN FLAME SEALED VIAL CALIBRATION STANDARD, 1.01 UCI 0.1M HCL SOLUTION ***STOCK***

CALIBRATION CERTIFICATES ARE ENCLOSED IN THIS BOX TK

LIMITED WARRANTY

ANALYTICS warrants that at the time of shipment the products sold by it are free from defects in material and workmanship and conform to specifications, which accompany the product. ANALYTICS makes no other warranty, expressed or implied, with respect to the products, including any warranty of merchantability or fitness for any particular purpose. Complaints of breach of warranty on radioactive products must be received in writing by ANALYTICS within two half-lives of the radioactive material or 30 days, whichever first occurs. The maximum liability for any breach of warranty shall be replacement of the product or refund of the invoice price of the product. ANALYTICS shall in no case be liable for special, incidental or consequential damages of any kind.



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Phone (404) 352-8677 Fax (404) 352-2837 email: analytics@mindspring.com www.analyticsinc.com

Important MSDS Information Enclosed

Ra-226 Radioactive Liquid Calibration Standard

Enclosed is the Material Safety Data Sheet (MSDS) for the item above which meets the OSHA Hazard Communication Standard criteria. The ingredients are:

Radioactive Nuclides
MSDS-1002 Hydrochloric Acid (not more than 24%)

This information provides conservative chemical safety guidelines for handling the pure forms of the ingredients.

The hazards of radioactivity are regulated by the U.S. Nuclear Regulatory Commission under Title 10, parts 19, 20, 30, 31 and 35 of the Code of Federal Regulations. The hazards of radioactivity are not addressed in the enclosed safety information.

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-1002

MATERIAL IDENTIFICATION: RADIOACTIVE MATERIAL IN HYDROCHLORIC ACID SOLUTION (NOT MORE THAN 24%)

REVISION DATE: APRIL 1, 1999

ANALYTICS, INC. 1380 SEABOARD IND. BLVD. ATLANTA, GEORGIA 30318 404-352-8677

FMFRGENCY NUMBERS: CHEM-TEL 800-255-3924 (US)

813-248-0585 (INT'L) (call collect)

THIS INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY. EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES.

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

SUBSTANCE: HYDROCHLORIC ACID SOLUTION

TRADE NAME & SYNONYMS: CHLORIHYDRIC ACID, HYDRO CHLORIDE, MURIATIC ACID

DOT SHIPPING NAME: HYDROCHLORIC ACID (NOT MORE THAN 24%)

FORMULA: HCI

CHEMICAL FAMILY: INORGANIC ACID

COMPONENT: PERCENT: **OSHA PEL**

ACGIH TLV

HYDROCHLORIC ACID0.04% - 24%

5 PPM

N/A

NFPA RATINGS: HEALTH=3 FIRE=0 REACTIVITY=1

CAUTION: CONTAINS RADIOACTIVE MATERIAL WHICH, ALTHOUGH BEYOND THE SCOPE OF MSDS REQUIREMENTS, SHOULD BE CONSIDERED THE PRINCIPAL HAZARD. THIS MATERIAL SHOULD BE HANDLED ONLY BY TRAINED INDIVIDUALS IN CONFORMANCE WITH 10 CFR REQUIREMENTS.

PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: CLEAR, COLORLESS SOLUTION WITH PUNGENT ODOR

BOILING POINT: 100 C. TO 109 C

SPECIFIC GRAVITY: 1.00 TO 1.18

VAPOR PRESSURE: 3,040 mm Hg @ 17.8 C MELTING POINT: N/A

VAPOR DENSITY (AIR): APPROX. 1.2

EVAPORATION RATE: 1

SOLUBILITY IN WATER: INFINITE

pH: 0+ TO 3.0

FIRE AND EXPLOSION HAZARD DATA

AUTO IGNITION TEMP.: N/A FLAMMABLE LIMITS: N/A FLASH POINT: N/A

LEL: N/A

UEL: N/A

EXTINGUISHABLE MEDIA: WATER SPRAY

FIRE FIGHTING: FULL PROTECTIVE CLOTHING AND NIOSH APPROVED POSITIVE PRESSURE SCBA SHOULD BE WORN.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CAUTION. MAY PRODUCE AIRBORNE RADIOACTIVE

MATERIALS DURING FIRE. CONSULT HEALTH PHYSICS/RADIATION SAFETY STAFF.



U.S. DEPARTMENT OF COMMERCE

National Institute of Standards & Technology Gaithersburg, MD 20899

Certificate of Participation

Analytics, Incorporated
Atlanta, Georgia

is a participant for the period January 1, 2003, through December 31, 2003, in a radioactivity measurements assurance program conducted by the National Institute of Standards and Technology, in cooperation with the Nuclear Energy Institute. Continued participation is evidenced by dated Reports of Traceability issued for particular radionuclides, which indicate the deviation of the participant's reported value from that measured by the National Institute of Standards and Technology. The significance of these Reports is addressed on the back of this certificate.

For the Director,

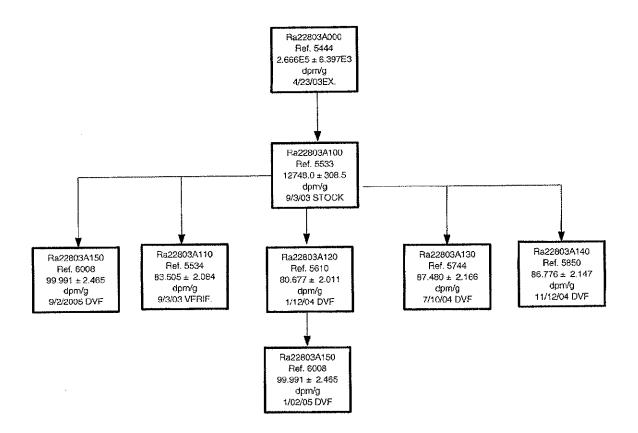
Lisa R. Karam, Group Leader.

Radioactivity Group Physics Laboratory

Vial Identifier	Constituen	t Prep Activity/Concentration	Std Wt Used	Prep,Decayed To Date Prep by Std Decayed Activity/	Concentration
	Parent St	andard: RA22803A150	Ref: 9/2/2005	9.9991E+01 ± 2.466E+00 DPM/G	
RASC4036	RA-228	1.1179E+01 ± 2.760E-01 DF	PM 0.1191 g	3/13/2006 3/13/2006 Armstron 9.3859E+01 ± 2.315E	+00 DPM/
		1.1179E+001 ± 1.118E+001	(1)	1.1179E+001 , 1.1179E+001	

Ra22803A000

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RA22803A

ISOTOPE DILUTION RECORD

1) Prepared by TDA	2) Date Prepared	9/2/2005
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.0020E+04 ±	2.426E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	1.1976	
7) (% Error) of Weight of Source Material used	0.4008 %	
8) Diluent	1 M TM HCL	
9) Total Weight of the Dilution (g)	120.01	
10) (% Error) of Total Weight of the Dilution	0.2500 %	
11) Specific Activity of Diluted Solution dpm/g	9.9991E+01 ±	2.465E+00
12) Total Uncertainty	2.466%	
13) Dilution Identification Number / Ref. Number	RA22803A150	6008
14) Calibration Reference Date	9/2/2005	
15) Isotope Inventory File update by/date	TDA	9/2/2005
16) Reviewed by/date	SEW	9/13/2005
17) Location QCLAB	18) Exhausted	
	· • • • • • • • • • • • • • • • • • • •	*
CALCULATIO	DNS	
7) % Error of Wt. used = (0.0048 / Weight of Source Material us	sed * 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100	9)	
11) Specific Activity = Source Activity * Wt. of Source Material u	used / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity 1/2)	% Total Uncertainty = (% error of Source Activity ^2 + % error of Wt. Used^2 + % error of Dilution Wt.^2)	

Form:

CC-006, 7/15/99, Rev 3

RA22803A.XLW

ISOTOPE DILUTION RECORD

1) Prepared byTDA	2) Date Prepared	9/2/2005
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.0020E+04 ±	2.426E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	1.1976	
7) (% Error) of Weight of Source Material used	0.4008 %	
8) Diluent	1 M TM HCL	
9) Total Weight of the Dilution (g)	120.01	
10) (% Error) of Total Weight of the Dilution	0.2500 %	
11) Specific Activity of Diluted Solution dpm/g	9.9991E+01 ±	2.465E+00
12) Total Uncertainty	2.466 %	
13) Dilution Identification Number / Ref. Number	RA22803A150	6008
14) Calibration Reference Date	9/2/2005	
15) Isotope Inventory File update by/date	TDA	9/2/2005
16) Reviewed by/date	SEW	9/13/2005
17) Location QCLAB	18) Exhausted	
**************************************	**************************************	*
7) % Error of Wt. used = (0.0048 / Weight of Source Material use		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material us	eed / Total Wt. of the Dilution	÷
12) % Total Uncertainty = (% error of Source Activity ^2	+ % error of Wt. Used^2 + % error of	of Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

RA22803A.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	11/12/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.1068E+04 ±	2.678E+02
5) Percent error of Source Activity	2.420 %	
6) Weight of Source Material used (g)	1.0426	
7) (% Error) of Weight of Source Material used	0.4604 %	
8) Diluent	1M HCL-P0400341	
9) Total Weight of the Dilution (g)	132.98	
10) (% Error) of Total Weight of the Dilution	0.2256 %	
11) Specific Activity of Diluted Solution dpm/g	8.6776E+01 ±	2.147E+00
12) Total Uncertainty	2.474 %	
13) Dilution Identification Number / Ref. Number	RA22803A140	5850
14) Calibration Reference Date	11/12/2004	
15) Isotope Inventory File update by/date	W.G	11/12/2004
16) Reviewed by/date	SEW	11/12/2004
17) Location QCLAB/STWT1077	18) Exhausted	

7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 5	% error of Wt. Used^2 + % error of t	Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

RA22803A.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	7/10/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.1506E+04 ±	2.785E+02
5) Percent error of Source Activity	2.420%	
6) Weight of Source Material used (g)	1.0166	
7) (% Error) of Weight of Source Material used	0.4722 %	
8) Diluent	1M HCL-P0400341	
9) Total Weight of the Dilution (g)	133.71	
10) (% Error) of Total Weight of the Dilution	0.2244 %	
11) Specific Activity of Diluted Solution dpm/g	8.7480E+01 ±	2.166E+00
12) Total Uncertainty	2.476 %	
13) Dilution Identification Number / Ref. Number	RA22803A130	5744
14) Calibration Reference Date	7/10/2004	
15) Isotope Inventory File update by/date	W.G	7/10/2004
16) Reviewed by/date	SEW	7/13/2004
17) Location QCLAB/STWT1015	18) Exhausted	
********************************	***********	
CALCULATIONS	5	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev</u> 3

Ra22803a.xlw

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	1/12/2004
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.2209E+04 ±	2.955E+02
5) Percent error of Source Activity	2,42 %	
6) Weight of Source Material used (g)	0.8710	
7) (% Error) of Weight of Source Material used	0.5511 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	131.81	
10) (% Error) of Total Weight of the Dilution	0.2276 %	
11) Specific Activity of Diluted Solution dpm/g	8.0677E+01 ±	2.011E+00
12) Total Uncertainty	2.492 %	
13) Dilution Identification Number / Ref. Number	RA22803A120	5610
14) Calibration Reference Date	1/12/2004	
15) Isotope Inventory File update by/date	W.G	1/12/2004
16) Reviewed by/date	SEW	1/15/2004
17) Location QCLAB/STWT0897	18) Exhausled	
***************************************	bkrkekunsessessessessessesses	
CALCULATIONS	1	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used '	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + %	% error of Wt. Used^2 + % error of L	Dilution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev</u> 3

Ra22803a.xlw

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/3/2003
3) Source Identification Number / Ref. Number	RA22803A100	5533
4) Source Activity (dpm ± dpm/g)	1.2748E+04 ±	3.085E+02
5) Percent error of Source Activity	2.42 %	
6) Weight of Source Material used (g)	0.8494	
7) (% Error) of Weight of Source Material used	0.5651 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	129.67	
10) (% Error) of Total Weight of the Dilution	0.2314 %	
11) Specific Activity of Diluted Solution dpm/g	8.3505E+01 ±	2.084E+00
12) Total Uncertainty	<u>2.496</u> %	
13) Dilution Identification Number / Ref. Number	RA22803A110	5534
14) Calibration Reference Date	9/3/2003	
15) Isotope Inventory File update by/date	W.G	9/3/2003
16) Reviewed by/date	SEW	9/4/2003
17) Location QCLAB/STWT0842	18) Exhausted	
CALCULATIONS	*******************	•
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = \(\langle \text{ error of Source Activity } 2 + \)	% error of Wt. Used^2 + % error o	of Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/3/2003
3) Source Identification Number / Ref. Number	RA22803A000	5444
4) Source Activity (dpm ± dpm/g)	2.5563E+05 ±	6.135E+03
5) Percent error of Source Activity	2.4 %	
6) Weight of Source Material used (g)	5.02032	
7) (% Error) of Weight of Source Material used	0.0956 %	
8) Diluent	1M HCL-P0300486	
9) Total Weight of the Dilution (g)	100.67	
10) (% Error) of Total Weight of the Dilution	0.2980 %	
11) Specific Activity of Diluted Solution dpm/g	1.2748E+04 ±	3.085E+02
12) Total Uncertainty	2.420 %	
13) Dilution Identification Number / Ref. Number	RA22803A100	5533
14) Calibration Reference Date	9/3/2003	
15) Isotope Inventory File update by/date	W.G	9/3/2003
16) Reviewed by/date	SEW	9/4/2003
17) Location QCLAB/STWT0841	18) Exhausted	Anthonopolitics
	**********************	49 *
CALCULATIONS		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error	of Dilution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev</u> 3

SEVERN TRENT

ISOTOPE RECORD FORM

1) Isotope <u>RA-228</u> 2) Re	eference Numbı 5444	
3) Half Life 5.75 yrs 4) Sto	orage Location QCLAB	
5) Source Identification Nun	RA22803A000	
CALIBRAT	«*************************************	
6) Activity as Received Units	23520.0 dps	
7) Overall Uncertainty Percent		
	04/23/03 12:00 EST (9.00AM)	
	2.6710E+05 ± 6.397E+3 dpm/g	
10) Volume or Mass (ml/g)	5.28350g	
11) Calibrated by	ANALYTICS	
12) Certificate Solution Numbe	65743-310	

13) Date Received)	
14) Surveyed by W.G		
15) Survey Reading (Beta/Gamma) cpm < 2K		
16) Survey Reading (Alpha) cpm < 1K		
######################################		
17) Activity Conv&3520.0 dps*60s/m	√5.28350g=2.6710E+5 ± 6,397E+3dpn	
18) Remark Used all to m	nake first dilution 9/3/03 wg	
19) Isotope File Updated by	04/29/03 W.G	
20) QC Approved		
- • •		



1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 · U.S.A. Phone (404) 352-8677

Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

65743-310

Ra-228 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:

Ra-228

ACTIVITY (dps):

2.352 E4

HALF-LIFE:

5.75 years

CALIBRATION DATE:

April 23, 2003 12:00 EST

TOTAL UNCERTAINTY*:

2.4%

*95% Confidence Level

Impurities: γ -impurities (other than decay products) <0.1%, Ra-226 <0.1%

5.28350 grams 4M HCl solution with 100 µg/g Ba carrier.

P O NUMBER 1735885-000 OP, Item 1

Produced from master solution P111V105.

SOURCE PREPARED BY:

Marraeve

M. Taskaeva, Radiochemist

Q A APPROVED:

4-23-03

RADIUM 228 CONTINUING CALIBRATION

Quality Assurance Report.

Generated 26-MAY-2006 11:36:26.11

QA Filename

: \$DISK1:[QUAD1.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description

: quad 1a 1" beta %eff

Parameter Units: percent

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 54.000000

Upper Bound : 57.799999

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean

: 55.904877

Std Deviation: 0.629910

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	 CHK	56.2000)	
2-MAR-2006 05:04		55.4000	1 1 1	
3-MAR-2006 05:00		56.4000		
4-MAR-2006 06:02	CHK	56.4000	ı i i i	
6-MAR-2006 05:01	CHK	56.5000		
7-MAR-2006 04:57	CHK	56.2000		
8-MAR-2006 05:31	CHK	55.6000		
9-MAR-2006 05:30	CHK	55.8000		
10-MAR-2006 05:35	CHK	56.500	0	
12-MAR-2006 07:37	CHK	56.200	0	
13-MAR-2006 05:08	CHK	56.400	0	
14-MAR-2006 04:53	CHK	55.900	0	
15-MAR-2006 05:03	CHK	55.300	0	
16-MAR-2006 04:53	CHK	56.300	0	
17-MAR-2006 05:35	CHK	56.800	0	
18-MAR-2006 07:07	CHK	56.600	0	
20-MAR-2006 04:58	CHK	55.700	0	•
21-MAR-2006 04:55	CHK	56.700	0	
22-MAR-2006 05:30	CHK	56.200	0	
23-MAR-2006 05:28	CHK	55.400	0	
24-MAR-2006 05:02	CHK	56.900	0	

25-MAR-2006 07:08 CHK	56.0000
27-MAR-2006 05:01 CHK	55.8000
28-MAR-2006 04:55 CHK	56.2000
29-MAR-2006 04:59 CHK	56.2000
30-MAR-2006 05:03 CHK	56.4000
31-MAR-2006 04:53 CHK	55.9000
1-APR-2006 06:28 CHK	56.1000
2-APR-2006 05:28 CHK	55.8000
3-APR-2006 04:49 CHK	55.2000
4-APR-2006 04:57 CHK	56.3000
5-APR-2006 04:51 CHK	56.6000
6-APR-2006 04:48 CHK	56.5000
7-APR-2006 04:48 CHK	55.8000
8-APR-2006 07:31 CHK	56.3000
9-APR-2006 07:38 CHK	54.9000
10-APR-2006 05:08 CHK	54.9000
11-APR-2006 04:53 CHK	56.3000
Quality Assurance Multi-Test Full F	! ! !
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Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
12-APR-2006 05:29 CHK	56 2000
12-AFK-2000 03.29 CHK	56.2000
Multi-Test Full Report	
With Test I till Report	
Description : quad 1b 1" beta %	eff
Parameter Units : percent Pa	
Turumoter Office . percent	rumeter Type : Generic
Lower/Upper Bounds Test Pa	arameters
	Upper Bound : 51.000000
Lower Bound . Thousand	Oppor Bound . 51.000000
Investigate Level: 2.000000 A	action Level : 3.000000
Sample Driven N-Sigma Tes	t Parameters
Start Date : 1-JUL-2005 00:00	End Date : 1-JAN-2006 00:00
Mean : 47.543636 Std	Deviation : 1.162435
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 04:59 CHK	47.6000
2-MAR-2006 05:04 CHK	46.8000
3-MAR-2006 05:00 CHK	47.3000
4-MAR-2006 06:02 CHK	46.9000

6-MAR-2006 05:01 CHK	47.0000
7-MAR-2006 04:57 CHK	47.4000
8-MAR-2006 05:31 CHK	47.5000
9-MAR-2006 05:30 CHK	47.1000
10-MAR-2006 05:35 CHK	46.6000
12-MAR-2006 07:37 CHK	47.6000
13-MAR-2006 05:08 CHK	47.3000
14-MAR-2006 04:53 CHK	47.2000
15-MAR-2006 05:03 CHK	47.6000
16-MAR-2006 04:53 CHK	46.3000
17-MAR-2006 05:35 CHK	46.8000
18-MAR-2006 07:07 CHK	47.4000
20-MAR-2006 04:58 CHK	47.1000
21-MAR-2006 04:55 CHK	47.1000
22-MAR-2006 05:30 CHK	48.3000
23-MAR-2006 05:28 CHK	47.1000
24-MAR-2006 05:02 CHK	47.7000
25-MAR-2006 07:08 CHK	46.9000
27-MAR-2006 05:01 CHK	47.5000
28-MAR-2006 04:55 CHK	47.1000
29-MAR-2006 04:59 CHK	46.9000
30-MAR-2006 05:03 CHK	47.1000
31-MAR-2006 04:53 CHK	47.9000
1-APR-2006 06:28 CHK	46.1000
2-APR-2006 05:28 CHK	46.7000
3-APR-2006 04:49 CHK	48.2000
4-APR-2006 04:57 CHK	47.2000
5-APR-2006 04:51 CHK	46.9000
6-APR-2006 04:48 CHK	47.0000
7-APR-2006 04:48 CHK	46.7000
8-APR-2006 07:31 CHK	46.2000
9-APR-2006 07:38 CHK	47.1000
10-APR-2006 05:08 CHK	47.5000
Quality Assurance Multi-Test Ful	11 Report (continued) Page: 3
-	Sample Analyst Value LU SD UD BS Rej
11-APR-2006 04:53 CHK	46.5000
12 ADD 2004 05:20 CHIZ	47,0000 111

Measurement Time S	Sample ID S	Sample Analyst	Value	LU SD UD BS Rej
11-APR-2006 04:53 Cl 12-APR-2006 05:29 Cl		46.5000 47.0000		

: quad 1c 1" beta %eff Description

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 49.000000 Upper Bound : 54.200001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 51.623169 Std Deviation : 0.712431

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	CHK	52.0000)	
2-MAR-2006 05:04	CHK	52.9000		
3-MAR-2006 05:00	CHK	51.6000		
4-MAR-2006 06:02	CHK	52.7000		
6-MAR-2006 05:01	CHK	51.3000		
7-MAR-2006 04:57	CHK	52.1000		
8-MAR-2006 05:31	CHK	50.5000		
9-MAR-2006 05:30	CHK	51.3000		
10-MAR-2006 05:35	CHK	52.000	0	
12-MAR-2006 07:37	CHK	51.900	0	
13-MAR-2006 05:08	CHK	52.000	0	
14-MAR-2006 04:53	CHK	51.300	0	
15-MAR-2006 05:03	CHK	52.000	0	
16-MAR-2006 04:53	CHK	51.900	0	
17-MAR-2006 05:35	CHK	51.500	0	
18-MAR-2006 07:07	CHK	52.000	0	
20-MAR-2006 04:58	CHK	51.800	0	
21-MAR-2006 04:55	CHK	52.900	0	•
22-MAR-2006 05:30	CHK	51.600	0	
23-MAR-2006 05:28	CHK	51.300	0	
24-MAR-2006 05:02	CHK	51.500	0	•
25-MAR-2006 07:08	CHK	51.300	0	
27-MAR-2006 05:01	CHK	51.400	0	
28-MAR-2006 04:55	CHK.	52.700	0	
29-MAR-2006 04:59	CHK	53.000	0	
30-MAR-2006 05:03	CHK	51.700	0	
31-MAR-2006 04:53	CHK	51.000	0	
1-APR-2006 06:28		51.8000		
2-APR-2006 05:28	CHK	51.4000		
3-APR-2006 04:49	CHK	51.7000		

4-APR-2006 04:57 CHK	51.5000
5-APR-2006 04:51 CHK	52.3000
6-APR-2006 04:48 CHK	50.9000
7-APR-2006 04:48 CHK	51.8000
8-APR-2006 07:31 CHK	51.7000
9-APR-2006 07:38 CHK	52.3000
Quality Assurance Multi-Test Fu	ull Report (continued)
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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
10-APR-2006 05:08	CHK	51.4000)	
11-APR-2006 04:53	CHK	51.6000)	
12-APR-2006 05:29	CHK	51.2000).	

Page: 4

-- Multi-Test Full Report --

Description : quad 1d 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 46.599998 Upper Bound : 50.000000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 48.296951 Std Deviation : 0.544062

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	47.900	0	
2-MAR-2006 05:04	CHK	49.200	0	
3-MAR-2006 05:00	CHK	48.200	0	
4-MAR-2006 06:02	CHK	48.700	0	•
6-MAR-2006 05:01	CHK	48.500	0	
7-MAR-2006 04:57	CHK	47.900	$ \cdot \cdot $	
8-MAR-2006 05:31	CHK	48.000	$ \cdot \cdot $	
9-MAR-2006 05:30	CHK	49.300	0	
10-MAR-2006 05:35	CHK	48.400	00	
12-MAR-2006 07:37	CHK	47.500	00	
13-MAR-2006 05:08	CHK	48.400	00	
14-MAR-2006 04:53	CHK	48.300	00	
15-MAR-2006 05:03	CHK	48.500	00	

16-MAR-2006 04:53 CHK 48.6	000
17-MAR-2006 05:35 CHK 48.0	000
18-MAR-2006 07:07 CHK 47.8	000
20-MAR-2006 04:58 CHK 49.5	000 In
21-MAR-2006 04:55 CHK 48.8	000
22-MAR-2006 05:30 CHK 48.4	000
23-MAR-2006 05:28 CHK 47.7	000
24-MAR-2006 05:02 CHK 47.9	000
25-MAR-2006 07:08 CHK 47.7	000
27-MAR-2006 05:01 CHK 48.4	000
28-MAR-2006 04:55 CHK 48.4	000
29-MAR-2006 04:59 CHK 48.6	000
30-MAR-2006 05:03 CHK 48.5	000
31-MAR-2006 04:53 CHK 49.4	000 In
1-APR-2006 06:28 CHK 48.400	00
2-APR-2006 05:28 CHK 48.200	00
3-APR-2006 04:49 CHK 48.500	00
4-APR-2006 04:57 CHK 47.900	00
5-APR-2006 04:51 CHK 48.100	00
6-APR-2006 04:48 CHK 48.500	00
7-APR-2006 04:48 CHK 48.500	00
8-APR-2006 07:31 CHK 47.600	00
Quality Accurance Multi Test Full Report (continued)) E

Page: 5

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
9-APR-2006 07:38	CHK	47.9000	 	
10-APR-2006 05:08	CHK	48.6000		
11-APR-2006 04:53	CHK	48.3000		
12-APR-2006 05:29	CHK	47.5000		

Quality Assurance Report.

Generated 26-MAY-2006 11:36:27.22

QA Filename

: \$DISK1:[QUAD1.QA]BKG_1.QAF;2

-- Multi-Test Full Report --

Description : quad 1a 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.617460 Std Deviation : 0.096733

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.5200		
2-MAR-2006 03:57	BKG	0.6700	ÌÌÌ	
3-MAR-2006 02:29	BKG	0.6400		
4-MAR-2006 02:28	BKG	0.7200		
4-MAR-2006 22:05	BKG	0.5400		
5-MAR-2006 22:28	BKG	0.5600		
7-MAR-2006 03:32	BKG	0.4700		
8-MAR-2006 03:03	BKG	0.7100		
9-MAR-2006 03:21	BKG	0.7500		
10-MAR-2006 01:31	BKG	0.7200		
11-MAR-2006 03:14	BKG	0.6500		
11-MAR-2006 19:23	BKG	0.6000		
12-MAR-2006 19:58	BKG	0.6800		
14-MAR-2006 03:30	BKG	0.6700		
15-MAR-2006 01:38	BKG	0.6600		
16-MAR-2006 03:14	BKG	0.6900		
17-MAR-2006 03:36	BKG	0.6300		
18-MAR-2006 04:19	BKG	0.6600		
18-MAR-2006 20:15	BKG	0.6800		
19-MAR-2006 19:37	BKG	0.6000		
21-MAR-2006 02:48	BKG	0.7200		
22-MAR-2006 01:40	BKG	0.6500		
23-MAR-2006 04:56	BKG	0.6500		
24-MAR-2006 02:48	BKG	0.5900		
25-MAR-2006 02:23	BKG	0.6200		
25-MAR-2006 20:29	BKG	0.6400		
26-MAR-2006 21:19	BKG	0.6200		
28-MAR-2006 03:48	BKG	0.6400		
29-MAR-2006 03:09	BKG	0.7000		
30-MAR-2006 03:00	BKG	0.6000		
31-MAR-2006 02:08	BKG	0.6200		
1-APR-2006 02:32	BKG	0.6600		
1-APR-2006 20:32	_	0.6700		
2-APR-2006 20:05		0.6300		
4-APR-2006 02:32		0.5600		
5-APR-2006 01:37		0.6100		
6-APR-2006 04:02	BKG	0.6300		

7-APR-2006 02:26 BKG	0.6600
8-APR-2006 04:21 BKG	0.5900
8-APR-2006 21:11 BKG	0.6000
9-APR-2006 21:25 BKG	0.5800

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
11-APR-2006 03:09 12-APR-2006 02:48		0.5800 0.6800	1 1 1	

-- Multi-Test Full Report --

Description : quad 1b 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.659153 Std Deviation : 0.179587

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.6000		
2-MAR-2006 03:57	BKG	0.7200		
3-MAR-2006 02:29	BKG	0.6700		
4-MAR-2006 02:28	BKG	0.7000		
4-MAR-2006 22:05	BKG	0.5800		
5-MAR-2006 22:28	BKG	0.6900		
7-MAR-2006 03:32	BKG	0.6400		
8-MAR-2006 03:03	BKG	0.6700		
9-MAR-2006 03:21	BKG	0.6500		
10-MAR-2006 01:31	BKG	0.6900		
11-MAR-2006 03:14	BKG	0.7100)	
11-MAR-2006 19:23	BKG	0.6200)	
12-MAR-2006 19:58	BKG	0.5600		
14-MAR-2006 03:30	BKG	0.6100		
15-MAR-2006 01:38	BKG	0.6200		
16-MAR-2006 03:14	BKG	0.6200)	
17-MAR-2006 03:36	BKG	0.6100		
18-MAR-2006 04:19	BKG	0.6600)	
18-MAR-2006 20:15	BKG	0.6300		

19-MAR-2006 19:37 BKG	
	0.6400
21-MAR-2006 02:48 BKG	0.6700
22-MAR-2006 01:40 BKG	0.6400
23-MAR-2006 04:56 BKG	0.7100
24-MAR-2006 02:48 BKG	0.6700
25-MAR-2006 02:23 BKG	0.6700
25-MAR-2006 20:29 BKG	0.6900
26-MAR-2006 21:19 BKG	0.6600
28-MAR-2006 03:48 BKG	0.7000
29-MAR-2006 03:09 BKG	0.6700
30-MAR-2006 03:00 BKG	0.6600
31-MAR-2006 02:08 BKG	0.6100
1-APR-2006 02:32 BKG	0.6400
1-APR-2006 20:32 BKG	0.6200
2-APR-2006 20:05 BKG	0.7000
4-APR-2006 02:32 BKG	0.6500
5-APR-2006 01:37 BKG	0.7100
6-APR-2006 04:02 BKG	0.6400
7-APR-2006 02:26 BKG	0.6400
8-APR-2006 04:21 BKG	0.6300
Quality Assurance Multi-Test Full	Report (continued) Page: 3
	Sample Analyst Value LU SD UD BS Rej
8-APR-2006 21:11 BKG	0.6900
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG	0.6900 0.7200
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG	0.6900 0.7200 0.7600
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG	0.6900 0.7200
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG	0.6900 0.7200 0.7600
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG 12-APR-2006 02:48 BKG Multi-Test Full Report	0.6900 0.7200 0.7600 0.6700
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG 12-APR-2006 02:48 BKG	0.6900 0.7200 0.7600 0.6700
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG 12-APR-2006 02:48 BKG Multi-Test Full Report Description : quad 1c 1" beta bkg	0.6900
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG 12-APR-2006 02:48 BKG Multi-Test Full Report Description : quad 1c 1" beta bk Parameter Units : cpm Pa	0.6900
8-APR-2006 21:11 BKG 9-APR-2006 21:25 BKG 11-APR-2006 03:09 BKG 12-APR-2006 02:48 BKG Multi-Test Full Report Description : quad 1c 1" beta ble Parameter Units : cpm Pa Investigate Level : 2.000000 Sample Driven N-Sigma Test Start Date : 1-JUL-2005 00:00 Mean : 0.583757 Std	0.6900

2-MAR-2006 03:57 BKG	0.5800	
3-MAR-2006 02:29 BKG	0.5300	
4-MAR-2006 02:28 BKG	0.5800	
4-MAR-2006 22:05 BKG	0.6000	
5-MAR-2006 22:28 BKG	0.5100	
7-MAR-2006 03:32 BKG	0.4500	
8-MAR-2006 03:03 BKG	0.5100	
9-MAR-2006 03:21 BKG	0.6000	
10-MAR-2006 01:31 BKG	0.5700	
11-MAR-2006 03:14 BKG	0.6300	
11-MAR-2006 19:23 BKG	0.5700	
12-MAR-2006 19:58 BKG	0.5700	
14-MAR-2006 03:30 BKG	0.5500	
15-MAR-2006 01:38 BKG	0.4900	
16-MAR-2006 03:14 BKG	0.5400	
17-MAR-2006 03:36 BKG	0.5700	
18-MAR-2006 04:19 BKG	0.5500	
18-MAR-2006 20:15 BKG	0.5000	
19-MAR-2006 19:37 BKG	0.5300	
21-MAR-2006 02:48 BKG	0.6300	
22-MAR-2006 01:40 BKG	0.6100	
23-MAR-2006 04:56 BKG	0.5100	
24-MAR-2006 02:48 BKG	0.5500	
25-MAR-2006 02:23 BKG	0.4900	
25-MAR-2006 20:29 BKG	0.4700]
26-MAR-2006 21:19 BKG	0.5300	
28-MAR-2006 03:48 BKG	0.5600	
29-MAR-2006 03:09 BKG	0.5700	
30-MAR-2006 03:00 BKG	0.5600	
31-MAR-2006 02:08 BKG	0.6300	
1-APR-2006 02:32 BKG	0.5400	ı
1-APR-2006 20:32 BKG	0.5700	
2-APR-2006 20:05 BKG	0.5400	
4-APR-2006 02:32 BKG	0.7600	
5-APR-2006 01:37 BKG	0.5300	
6-APR-2006 04:02 BKG	0.5600	
On the Assessment Mark True Call Dance	at (a a antinosa a dV	

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-APR-2006 02:26	BKG	0.5400	 	
8-APR-2006 04:21	BKG	0.5400		
8-APR-2006 21:11	BKG	0.5600		

Page: 4

9-APR-2006 21:25 BKG	0.5100	
11-APR-2006 03:09 BKG	0.5400	
12-APR-2006 02:48 BKG	0.5200	

Description : quad 1d 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Manual

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.606455 Std Deviation : 0.089749

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.5500		
2-MAR-2006 03:57	BKG	0.5900		
3-MAR-2006 02:29	BKG	0.5700		
4-MAR-2006 02:28	BKG	0.6900		
4-MAR-2006 22:05	BKG	0.6600		
5-MAR-2006 22:28	BKG	0.5300		
7-MAR-2006 03:32	BKG	0.6100		
8-MAR-2006 03:03	BKG	0.6400		
9-MAR-2006 03:21	BKG	0.6800		
10-MAR-2006 01:31	BKG	0.5700)	
11-MAR-2006 03:14	· BKG	0.6700)	
11-MAR-2006 19:23	BKG	0.6400)	
12-MAR-2006 19:58	BKG	0.6200)	
14-MAR-2006 03:30	BKG	0.6300)	
15-MAR-2006 01:38	BKG	0.6100)	
16-MAR-2006 03:14	BKG	0.6000)	
17-MAR-2006 03:36	BKG	0.5900)	
18-MAR-2006 04:19	BKG	0.6600)	
18-MAR-2006 20:15	BKG	0.5600)	
19-MAR-2006 19:37	' BKG	0.5500)	
21-MAR-2006 02:48	BKG	0.6700)	
22-MAR-2006 01:40	BKG	0.6200)	
23-MAR-2006 04:56	BKG	0.6000)	
24-MAR-2006 02:48	BKG	0.6900		
25-MAR-2006 02:23	BKG	0.6000)	
25-MAR-2006 20:29) BKG	0.6200)	

26-MAR-2006 21:19 BKG	0.6300
28-MAR-2006 03:48 BKG	0.6200
29-MAR-2006 03:09 BKG	0.6300
30-MAR-2006 03:00 BKG	0.6000
31-MAR-2006 02:08 BKG	0.6700
1-APR-2006 02:32 BKG	0.6300
1-APR-2006 20:32 BKG	0.6400
2-APR-2006 20:05 BKG	0.6300
4-APR-2006 02:32 BKG	0.8600 In

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
5-APR-2006 01:37	BKG	0.5700	 	
6-APR-2006 04:02		0.6300		
7-APR-2006 02:26	BKG	0.6000		
8-APR-2006 04:21	BKG	0.6500]]	
8-APR-2006 21:11	BKG	0.6700		
9-APR-2006 21:25	BKG	0.6200		
11-APR-2006 03:09	BKG	0.7000		
12-APR-2006 02:48	BKG	0.6400	ÌÌÌ	

Quality Assurance Report.

Generated 26-MAY-2006 11:36:35.44

QA Filename

: \$DISK1:[QUAD2.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description

: quad 2a 1" beta %eff

Parameter Units: percent

Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound

: 41.799999

Upper Bound : 45.099998

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean

: 43.453659

Std Deviation: 0.556654

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	43.5000		
2-MAR-2006 05:04	CHK	43.0000		
3-MAR-2006 05:00	CHK	42.7000		
4-MAR-2006 06:02	CHK	44.0000		
6-MAR-2006 05:01	CHK	43.8000		
7-MAR-2006 04:57	CHK	43.4000		
8-MAR-2006 05:31	CHK	43.8000		
9-MAR-2006 05:30	CHK	43.1000		
10-MAR-2006 05:36	CHK	42.6000)	
12-MAR-2006 07:37	CHK	42.6000)	
13-MAR-2006 05:08	CHK	43.0000)	
14-MAR-2006 04:53	CHK	42.8000)	
15-MAR-2006 05:03	CHK	42.6000)	
16-MAR-2006 04:53	CHK	42.6000)	
17-MAR-2006 05:35	CHK	43.2000)	
18-MAR-2006 07:02	CHK	42.4000)	
20-MAR-2006 04:58	CHK	42.3000) In	
21-MAR-2006 04:55	CHK	42.9000)	
22-MAR-2006 05:25	CHK	43.0000)	
23-MAR-2006 05:28	CHK	43.2000)	
24-MAR-2006 05:02	CHK	44.0000)	

1 _23 _ 2				
25-MAR-2006 07:03 CHK	43.3000			
27-MAR-2006 05:02 CHK	43.6000			
28-MAR-2006 04:55 CHK	44.5000			
29-MAR-2006 04:59 CHK	43.8000			
30-MAR-2006 05:03 CHK	43.6000			
31-MAR-2006 04:53 CHK	43.4000			
1-APR-2006 06:23 CHK	43.4000			
2-APR-2006 05:28 CHK	42.6000			
3-APR-2006 04:50 CHK	43.2000			
4-APR-2006 04:57 CHK	42.2000 In			
5-APR-2006 04:51 CHK	43.3000			
6-APR-2006 04:48 CHK	43.5000			
7-APR-2006 04:43 CHK	42.9000			
8-APR-2006 07:32 CHK	43.1000			
9-APR-2006 07:38 CHK	43.5000			
10-APR-2006 05:08 CHK	43.4000			
11-APR-2006 04:58 CHK	42.9000			
Quality Assurance Multi-Test Full R	Report (continued) Page : 2			
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej			
12-APR-2006 05:24 CHK	42.8000			
Multi Tost Full Doport				
Multi-Test Full Report				
Description and 106 184 at 0/ off				
Description : quad 2b 1" beta %eff				
Parameter Units : percent Parameter Type : Manual				
Lower/Upper Bounds Test Parameters				
	Upper Bound : 47.400002			
Lower Bound : 44.000000 Opper Bound : 47.400002				
Investigate Level: 2.000000 Action Level: 3.000000				
Garanta Duiana N. Gianna Tant	4 D			
Sample Driven N-Sigma Test	·			
Start Date : 1-JUL-2005 00:00				
Mean : 45.754269 Std I	Deviation: 0.543940			
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej			
1 MAD 2004 04-50 CTUZ	46 1000 1			
1-MAR-2006 04:59 CHK	46.1000			
2-MAR-2006 05:04 CHK 3-MAR-2006 05:00 CHK	46.1000			
- 40 0 to the company of the company	4316000			

4-MAR-2006 06:02 CHK

45.3000 | | |

6-MAR-2006 05:01 CHK	45.0000
7-MAR-2006 04:57 CHK	45.4000
8-MAR-2006 05:31 CHK	44.8000
9-MAR-2006 05:30 CHK	45.5000
10-MAR-2006 05:36 CHK	45.4000
12-MAR-2006 07:37 CHK	44.6000 In
13-MAR-2006 05:08 CHK	45.4000
14-MAR-2006 04:53 CHK	46.5000
15-MAR-2006 05:03 CHK	45.2000
16-MAR-2006 04:53 CHK	45.5000
17-MAR-2006 05:35 CHK	44.5000 In
18-MAR-2006 07:02 CHK	46.2000
20-MAR-2006 04:58 CHK	46.0000
21-MAR-2006 04:55 CHK	46.0000
22-MAR-2006 05:25 CHK	46.1000
23-MAR-2006 05:28 CHK	45.5000
24-MAR-2006 05:02 CHK	45.8000
25-MAR-2006 07:03 CHK	45.4000
27-MAR-2006 05:02 CHK	45.8000
28-MAR-2006 04:55 CHK	46.1000
29-MAR-2006 04:59 CHK	47.0000 In
30-MAR-2006 05:03 CHK	45.4000
31-MAR-2006 04:53 CHK	45.4000
1-APR-2006 06:23 CHK	45.4000
2-APR-2006 05:28 CHK	45.7000
3-APR-2006 04:50 CHK	46.0000
4-APR-2006 04:57 CHK	45.9000
5-APR-2006 04:51 CHK	45.4000
6-APR-2006 04:48 CHK	46.2000
7-APR-2006 04:43 CHK	46.1000
8-APR-2006 07:32 CHK	45.9000
9-APR-2006 07:38 CHK	46.5000
10-APR-2006 05:08 CHK	45.4000
Quality Assurance Multi-Test Full	Report (continued) Page: 3
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
11-APR-2006 04:58 CHK	45.5000
12-APR-2006 05:24 CHK	46.2000
	111

Description : quad 2c 1" beta %eff

Parameter Units : percent Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 40.799999 Upper Bound : 44.400002

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 42.586826 Std Deviation : 0.602860

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	42.3000		
2-MAR-2006 05:04	CHK	42.3000		
3-MAR-2006 05:00	CHK	42.2000		
4-MAR-2006 06:02	CHK	43.3000		
6-MAR-2006 05:01	CHK	42.3000		
7-MAR-2006 04:57	CHK	41.7000		
8-MAR-2006 05:31	CHK	43.0000		
9-MAR-2006 05:30	CHK	43.0000		÷
10-MAR-2006 05:36	CHK	43.3000		
12-MAR-2006 07:37		43.3000		
13-MAR-2006 05:08		42.8000		
14-MAR-2006 04:53		42.4000	1 1 1	
15-MAR-2006 05:03		42.1000	1 1 1	
16-MAR-2006 04:53		42.6000	1 1 1	
17-MAR-2006 05:35		42.6000		
18-MAR-2006 07:02		41.2000		
20-MAR-2006 04:58		42.1000	, , ,	
21-MAR-2006 04:55		42.1000	, , ,	
22-MAR-2006 05:25		41.9000		
23-MAR-2006 05:28		41.9000	1 , 1	
24-MAR-2006 05:02		42.4000		
25-MAR-2006 07:03		41.8000	, , ,	
27-MAR-2006 05:02		41.5000		
28-MAR-2006 04:55		43.3000		
29-MAR-2006 04:59		43.2000		
30-MAR-2006 05:03		42.4000		
31-MAR-2006 04:53		42.2000	J	
1-APR-2006 06:23		42.4000		
2-APR-2006 05:28		42.9000		
3-APR-2006 04:50	CHK	42.7000		

4-APR-2006 04:57 CHK	41.9000
5-APR-2006 04:51 CHK	42.7000
6-APR-2006 04:48 CHK	41.4000 []
7-APR-2006 04:43 CHK	42.1000
8-APR-2006 07:32 CHK	42.7000
9-APR-2006 07:38 CHK	41.9000 [

Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
10-APR-2006 05:08	CHK	41.6000)	
11-APR-2006 04:58	CHK	42.8000		
12-APR-2006 05:24	CHK	43.1000		

-- Multi-Test Full Report --

Description : quad 2d 1" beta %eff

Parameter Units : percent Parameter Type : Manual

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 41.799999 Upper Bound : 45.560001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 43.687500 Std Deviation : 0.624949

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	43.100	0	-
2-MAR-2006 05:04	CHK	43.700	0	
3-MAR-2006 05:00	CHK	43.100	0	
4-MAR-2006 06:02	CHK	44.500	0	
6-MAR-2006 05:01	CHK	42.500	0	
7-MAR-2006 04:57	CHK	43.100	0	
8-MAR-2006 05:31	CHK	43.300	0	
9-MAR-2006 05:30	CHK	43.600	0	
10-MAR-2006 05:36	CHK	43.600	00	
12-MAR-2006 07:37	' CHK	42.800	00	
13-MAR-2006 05:08	CHK.	43.200	00	
14-MAR-2006 04:53	CHK	43.700	00	
15-MAR-2006 05:03	CHK	42.600	00	

16-MAR-2006 04:53 CHK	44.2000
17-MAR-2006 05:35 CHK	44.4000
18-MAR-2006 07:02 CHK	43.3000
20-MAR-2006 04:58 CHK	43.3000
21-MAR-2006 04:55 CHK	43.6000
22-MAR-2006 05:25 CHK	43.7000
23-MAR-2006 05:28 CHK	43.4000
24-MAR-2006 05:02 CHK	44.3000
25-MAR-2006 07:03 CHK	43.4000
27-MAR-2006 05:02 CHK	43.4000
28-MAR-2006 04:55 CHK	44.5000
29-MAR-2006 04:59 CHK	43.4000
30-MAR-2006 05:03 CHK	43.2000
31-MAR-2006 04:53 CHK	43.1000
1-APR-2006 06:23 CHK	43.6000
2-APR-2006 05:28 CHK	43.7000
3-APR-2006 04:50 CHK	42.2000 In
4-APR-2006 04:57 CHK	43.6000
5-APR-2006 04:51 CHK	42.5000
6-APR-2006 04:48 CHK	43.1000
7-APR-2006 04:43 CHK	43.3000
8-APR-2006 07:32 CHK	42.8000
Quality Assurance Multi-Test Full Report (co	ontinued)

Page: 5

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
9-APR-2006 07:38 10-APR-2006 05:08 11-APR-2006 04:58 12-APR-2006 05:24	CHK CHK	43.5000 43.3000 42.8000 42.7000		

Quality Assurance Report.

Generated 26-MAY-2006 11:36:37.16

QA Filename : \$DISK1:[QUAD2.QA]BKG_1.QAF;5

-- Multi-Test Full Report --

Description : quad 2a 1" beta bkg, cpm

Parameter Units : cpm

Parameter Type:

Measurement Time

Sample ID Sample Analyst

Value LU|SD|UD|BS Rej

1-MAR-2006 02:38 BKG	0.2000
2-MAR-2006 03:57 BKG	0.2100
3-MAR-2006 02:29 BKG	0.2200
4-MAR-2006 02:28 BKG	0.2400
4-MAR-2006 22:05 BKG	0.1900
5-MAR-2006 22:28 BKG	0.2000
7-MAR-2006 03:32 BKG	0.2400
8-MAR-2006 03:03 BKG	0.2200
9-MAR-2006 03:22 BKG	0.3300
10-MAR-2006 01:01 BKG	0.2200
11-MAR-2006 03:14 BKG	0.2700
11-MAR-2006 19:23 BKG	0.1900
12-MAR-2006 19:58 BKG	0.2100
14-MAR-2006 03:30 BKG	0.3200
15-MAR-2006 01:38 BKG	0.2100
16-MAR-2006 03:14 BKG	0.2500
17-MAR-2006 03:37 BKG	0.2400
18-MAR-2006 04:19 BKG	0.2300
18-MAR-2006 20:15 BKG	0.2300
19-MAR-2006 19:38 BKG	0.2200
21-MAR-2006 02:49 BKG	0.2800
22-MAR-2006 01:40 BKG	0.2400
23-MAR-2006 04:56 BKG	0.2100
24-MAR-2006 02:48 BKG	0.2300
25-MAR-2006 02:23 BKG	0.2100
25-MAR-2006 20:29 BKG	0.2200
26-MAR-2006 21:19 BKG	0.2000
28-MAR-2006 03:48 BKG	0.2400
29-MAR-2006 03:09 BKG	0.2100
30-MAR-2006 02:15 BKG	0.2200
31-MAR-2006 02:08 BKG	0.2600
1-APR-2006 02:32 BKG	0.2600 }
1-APR-2006 20:32 BKG	0.2200
2-APR-2006 20:05 BKG	0.2200
4-APR-2006 02:32 BKG	0.3600
5-APR-2006 01:37 BKG	0.2200
6-APR-2006 04:02 BKG	0.2900
7-APR-2006 02:26 BKG	0.2500
8-APR-2006 04:21 BKG	0.2500
8-APR-2006 21:11 BKG	0.2400
9-APR-2006 21:25 BKG	0.1800
11-APR-2006 03:09 BKG	0.2000
12-APR-2006 02:48 BKG	0.2300

Description : quad 2b 1" beta bkg, cpm

Parameter Units : cpm Parameter Type :

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	ulti-Test Full	Report (continued)		Page: 2
Measurement Time	Sample ID	Sample Analyst		LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2500		
2-MAR-2006 03:57	BKG	0.1900		
3-MAR-2006 02:29	BKG	0.2400		
4-MAR-2006 02:28	BKG	0.2800		
4-MAR-2006 22:05	BKG	0.2400		
5-MAR-2006 22:28	BKG	0.2400		
7-MAR-2006 03:32	BKG	0.2100		
8-MAR-2006 03:03	BKG	0.2700		
9-MAR-2006 03:22	BKG	0.2800		
10-MAR-2006 01:01	BKG	0.2700)	
11-MAR-2006 03:14	BKG	0.3100)	
11-MAR-2006 19:23	BKG	0.2600)	
12-MAR-2006 19:58	BKG	0.2700)	
14-MAR-2006 03:30	BKG	0.2700)	
15-MAR-2006 01:38	BKG	0.2400)	
16-MAR-2006 03:14	BKG	0.2700)	
17-MAR-2006 03:37	' BKG	0.2800		
18-MAR-2006 04:19	BKG	0.2700)	
18-MAR-2006 20:15	BKG	0.3000)	,
19-MAR-2006 19:38	BKG	0.2600)	
21-MAR-2006 02:49	BKG	0.3100)	
22-MAR-2006 01:40	BKG	0.2900)	
23-MAR-2006 04:56	BKG	0.3000)	
24-MAR-2006 02:48	BKG	0.2600)	
25-MAR-2006 02:23	BKG	0.2500)	
25-MAR-2006 20:29	BKG	0.2600		
26-MAR-2006 21:19	BKG	0.2200)	
28-MAR-2006 03:48	BKG	0.3000)	
29-MAR-2006 03:09	BKG	0.3400) i	
30-MAR-2006 02:15	BKG	0.2600) i	
31-MAR-2006 02:08	BKG	0.280	0	

1-APR-2006 02:32 BKG	0.2600	
1-APR-2006 20:32 BKG	0.3000	
2-APR-2006 20:05 BKG	0.2200	1
4-APR-2006 02:32 BKG	0.2500	
5-APR-2006 01:37 BKG	0.2800	
6-APR-2006 04:02 BKG	0.2500	
7-APR-2006 02:26 BKG	0.2800	
8-APR-2006 04:21 BKG	0.2100	
8-APR-2006 21:11 BKG	0.2400	
9-APR-2006 21:25 BKG	0.2400	
11-APR-2006 03:09 BKG	0.2800	
12-APR-2006 02:48 BKG	0.2900	

Description : quad 2c 1" beta bkg, cpm

Parameter Units : cpm Parameter Type :

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2000	 	· -
2-MAR-2006 03:57	BKG	0.2400	İİİ	
3-MAR-2006 02:29	BKG	0.2100		
4-MAR-2006 02:28	BKG	0.2500		
Quality Assurance M	lulti-Test Full	Report (continued)		Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
4-MAR-2006 22:05	BKG	0.2800		
5-MAR-2006 22:28	BKG	0.2000		
7-MAR-2006 03:32	BKG	0.2100		
8-MAR-2006 03:03	BKG	0.2600		
9-MAR-2006 03:22	BKG	0.2400		
10-MAR-2006 01:01	BKG	0.2600		
11-MAR-2006 03:14	BKG	0.2400		
11-MAR-2006 19:23	BKG	0.2200		
12-MAR-2006 19:58	BKG	0.2400		
14-MAR-2006 03:30	BKG	0.2600		
15-MAR-2006 01:38	BKG	0.2700		
16-MAR-2006 03:14	BKG	0.2800		
17-MAR-2006 03:37	BKG	0.2500		
18-MAR-2006 04:19	BKG	0.2200		
18-MAR-2006 20:15	BKG	0.2300		

19-MAR-2006 19:38 BKG	0.2100
21-MAR-2006 02:49 BKG	0.3200
22-MAR-2006 01:40 BKG	0.2700
23-MAR-2006 04:56 BKG	0.2500
24-MAR-2006 02:48 BKG	0.2800
25-MAR-2006 02:23 BKG	0.2600
25-MAR-2006 20:29 BKG	0.2200
26-MAR-2006 21:19 BKG	0.2400
28-MAR-2006 03:48 BKG	0.2800
29-MAR-2006 03:09 BKG	0.2700
30-MAR-2006 02:15 BKG	0.2400
31-MAR-2006 02:08 BKG	0.3000
1-APR-2006 02:32 BKG	0.1900
1-APR-2006 20:32 BKG	0.2600
2-APR-2006 20:05 BKG	0.2500
4-APR-2006 02:32 BKG	0.4600
5-APR-2006 01:37 BKG	0.2700
6-APR-2006 04:02 BKG	0.2400
7-APR-2006 02:26 BKG	0.3200
8-APR-2006 04:21 BKG	0.2300
8-APR-2006 21:11 BKG	0.2600
9-APR-2006 21:25 BKG	0.2400
11-APR-2006 03:09 BKG	0.2600
12-APR-2006 02:48 BKG	0.2400

Description : quad 2d 1" beta bkg, cpm

Parameter Units : cpm Parameter Type :

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	RKG	0.2400	. 	
2-MAR-2006 03:57	_	0.2200		
3-MAR-2006 02:29	BKG	0.2700		
4-MAR-2006 02:28	BKG	0.2500		
4-MAR-2006 22:05	BKG	0.2300		
5-MAR-2006 22:28	BKG	0.2100		
7-MAR-2006 03:32	BKG	0.2300		
8-MAR-2006 03:03	BKG	0.2800		
Quality Assurance M	Iulti-Test Full	Report (continued)		Page: 4

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

9-MAR-2006 03:22 BKG	0.2700
10-MAR-2006 01:01 BKG	0.2300
11-MAR-2006 03:14 BKG	0.2100
11-MAR-2006 19:23 BKG	0.2200
12-MAR-2006 19:58 BKG	0.2400
14-MAR-2006 03:30 BKG	0.2300
15-MAR-2006 01:38 BKG	0.1900
16-MAR-2006 03:14 BKG	0.2700
17-MAR-2006 03:37 BKG	0.2500
18-MAR-2006 04:19 BKG	0.2400
18-MAR-2006 20:15 BKG	0.1900
19-MAR-2006 19:38 BKG	0.2200
21-MAR-2006 02:49 BKG	0.2600
22-MAR-2006 01:40 BKG	0.2600
23-MAR-2006 04:56 BKG	0.2200
24-MAR-2006 02:48 BKG	0.2900
25-MAR-2006 02:23 BKG	0.2300
25-MAR-2006 20:29 BKG	0.2300
26-MAR-2006 21:19 BKG	0.2100
28-MAR-2006 03:48 BKG	0.2300
29-MAR-2006 03:09 BKG	0.2400
30-MAR-2006 02:15 BKG	0.1900
31-MAR-2006 02:08 BKG	0.3000
1-APR-2006 02:32 BKG	0.2400
1-APR-2006 20:32 BKG	0.2400
2-APR-2006 20:05 BKG	0.2400
4-APR-2006 02:32 BKG	0.3400
5-APR-2006 01:37 BKG	0.2400
6-APR-2006 04:02 BKG	0.2700
7-APR-2006 02:26 BKG	0.2600
8-APR-2006 04:21 BKG	0.2300
8-APR-2006 21:11 BKG	0.2300
9-APR-2006 21:25 BKG	0.2400
11-APR-2006 03:09 BKG	0.1900
12-APR-2006 02:48 BKG	0.2400
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Quality Assurance Report. Generated 26-MAY-2006 11:36:45.28

QA Filename : \$DISK1:[QUAD3.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : quad 3a 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 41.500000 Upper Bound : 44.680000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 43.085625 Std Deviation : 0.532568

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	43.2000		
2-MAR-2006 05:04	CHK	44.5000	In	
3-MAR-2006 04:55	CHK	41.9000	In	
4-MAR-2006 06:02	CHK	42.4000		
6-MAR-2006 05:01	CHK	43.2000		
7-MAR-2006 04:57	CHK	43.1000		
8-MAR-2006 05:31	CHK	42.2000		
9-MAR-2006 05:30	CHK	42.2000		
10-MAR-2006 05:36	CHK	43.0000		
13-MAR-2006 05:08	CHK	42.6000		
14-MAR-2006 04:54	CHK	43.1000		
15-MAR-2006 05:03	CHK	43.4000		
16-MAR-2006 04:53	CHK	42.1000		
17-MAR-2006 05:35	CHK	42.6000		
18-MAR-2006 07:07	CHK	42.9000	İİİ	
19-MAR-2006 07:09	CHK	42.1000		
20-MAR-2006 04:58	CHK	43.3000	ÌÌÌ	
21-MAR-2006 04:55	CHK	43.4000	iii	
22-MAR-2006 05:30	CHK	42.7000		
23-MAR-2006 05:28	CHK	41.9000	In	
24-MAR-2006 05:02	CHK	43.0000		

25-MAR-2006 07:03 CHK	42.4000
26-MAR-2006 06:54 bkg	No Value
26-MAR-2006 07:22 CHK	42.2000
27-MAR-2006 05:01 CHK	42.8000
28-MAR-2006 04:55 CHK	43.8000
29-MAR-2006 04:59 CHK	42.6000
30-MAR-2006 05:03 CHK	42.7000
31-MAR-2006 04:53 CHK	42.9000
1-APR-2006 06:28 CHK	42.9000
2-APR-2006 05:29 CHK	42.6000
3-APR-2006 04:44 CHK	43.2000
4-APR-2006 04:57 CHK	42.5000
5-APR-2006 04:46 CHK	42.6000
6-APR-2006 04:48 CHK	42.7000
7-APR-2006 04:43 CHK	42.9000
8-APR-2006 07:32 CHK	43.5000
9-APR-2006 07:38 CHK	41.9000 [In]
Quality Assurance Multi-Test Full	Report (continued) Page: 2
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
10 A DD 2006 05 00 GUY	40 1000 - 1 1
10-APR-2006 05:08 CHK	42.1000
11-APR-2006 04:58 CHK	43.3000
12-APR-2006 05:29 CHK	42.8000
Multi-Test Full Report	
7	
Description : quad 3b 1" beta %	
Parameter Units: percent Parameter Units:	arameter Type : Generic
I/II D 1 T (I	
Lower/Upper Bounds Test F	
Lower Bound : 42.869999	Upper Bound : 46.009998
Investigate Level: 2.000000	Action Level : 3.000000
Sampla Drivan M. Siama Ta	gt Parameters
Sample Driven N-Sigma Tel	End Date : 1-JAN-2006 00:00
Mean : 44.445625 Std	
141-4-15025 Stu	Deviation . 0.322434
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 04:59 CHK	44.1000
2-MAR-2006 05:04 CHK	44 6000

44.6000 | | |

2-MAR-2006 05:04 CHK

3-MAR-2006 04:55 CHK	44.3000	
4-MAR-2006 06:02 CHK	44.4000	
6-MAR-2006 05:01 CHK	44.4000	
7-MAR-2006 04:57 CHK	44.7000	
8-MAR-2006 05:31 CHK	44.4000	
9-MAR-2006 05:30 CHK	44.5000	
10-MAR-2006 05:36 CHK	44.0000	
13-MAR-2006 05:08 CHK	44.3000	
14-MAR-2006 04:54 CHK	44.6000	
15-MAR-2006 05:03 CHK	44.1000	
16-MAR-2006 04:53 CHK	44.7000	
17-MAR-2006 05:35 CHK	43.9000	
18-MAR-2006 07:07 CHK	44.6000	
19-MAR-2006 07:09 CHK	44.0000	
20-MAR-2006 04:58 CHK	43.8000	
21-MAR-2006 04:55 CHK	44.3000	
22-MAR-2006 05:30 CHK	43.7000	
23-MAR-2006 05:28 CHK	44.5000	
24-MAR-2006 05:02 CHK	44.3000	
25-MAR-2006 07:03 CHK	43.6000	
26-MAR-2006 06:54 bkg	No Value	
26-MAR-2006 07:22 CHK	43.7000	
27-MAR-2006 05:01 CHK	43.6000	
28-MAR-2006 04:55 CHK	45.7000	In
29-MAR-2006 04:59 CHK	45.8000	In
30-MAR-2006 05:03 CHK	44.0000	
31-MAR-2006 04:53 CHK	44.9000	
1-APR-2006 06:28 CHK	44.4000	
2-APR-2006 05:29 CHK	44.6000	
3-APR-2006 04:44 CHK	43.9000	
4-APR-2006 04:57 CHK	44.8000	
5-APR-2006 04:46 CHK	43.4000	In
6-APR-2006 04:48 CHK	44.9000	
Quality Assurance Multi-Test Full Re	nort (continued)	P

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-APR-2006 04:43	CHV	44.2000		
8-APR-2006 07:32	_	44.8000		
9-APR-2006 07:38	CHK	44.2000	İİİ	
10-APR-2006 05:08	CHK	43.9000		
11-APR-2006 04:58	CHK	44.2000		
12-APR-2006 05:29	CHK	44.9000		

Description : quad 3c 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 44.080002 Upper Bound : 47.900002

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 45.983124 Std Deviation : 0.569146

	Sample ID	Sample Analyst		LU SD UD BS Rej
1-MAR-2006 04:59		46.3000		
2-MAR-2006 05:04	CHK	45.9000		
3-MAR-2006 04:55	CHK	46.2000		
4-MAR-2006 06:02	CHK	45.2000		
6-MAR-2006 05:01	CHK	46.1000		
7-MAR-2006 04:57	CHK	45.4000		
8-MAR-2006 05:31	CHK	45.3000		
9-MAR-2006 05:30	CHK	45.2000		
10-MAR-2006 05:36	CHK	46.1000	111	
13-MAR-2006 05:08	CHK	45.3000		
14-MAR-2006 04:54	· CHK	45.6000	111	
15-MAR-2006 05:03	CHK	45.4000		
16-MAR-2006 04:53	CHK	46.2000		
17-MAR-2006 05:35	CHK	45.3000		
18-MAR-2006 07:07	CHK	45.1000		
19-MAR-2006 07:09	CHK	45.1000		
20-MAR-2006 04:58	CHK	45.8000		
21-MAR-2006 04:55	CHK	45.3000		
22-MAR-2006 05:30	CHK	45.4000	-111	
23-MAR-2006 05:28	CHK	45.2000	-	
24-MAR-2006 05:02	CHK	46.2000		
25-MAR-2006 07:03	CHK	45.3000		
26-MAR-2006 06:54	bkg	No Value		
26-MAR-2006 07:22	CHK	44.4000	In	
27-MAR-2006 05:01	CHK	45.6000		
28-MAR-2006 04:55	CHK	46.1000		

29-MAR-2006 04:59 CHK	46.2000
30-MAR-2006 05:03 CHK	45.4000
31-MAR-2006 04:53 CHK	45.4000
1-APR-2006 06:28 CHK	45.8000
2-APR-2006 05:29 CHK	45.8000
3-APR-2006 04:44 CHK	46.9000

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
4-APR-2006 04:57	СНК	45.9000		 ,
5-APR-2006 04:46	CHK	45.4000	iii	
6-APR-2006 04:48	CHK	45.3000	ÌÌÌ	
7-APR-2006 04:43	CHK	45.8000		
8-APR-2006 07:32	CHK	45.8000		
9-APR-2006 07:38	CHK	45.7000		
10-APR-2006 05:08	CHK	46.0000		
11-APR-2006 04:58	CHK	44.8000	In	
12-APR-2006 05:29	CHK	45.5000		

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-- Multi-Test Full Report --

Description : quad 3d 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 46.038124 Std Deviation : 0.573291

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	CHK	46.3000)	
2-MAR-2006 05:04	CHK	46.3000	ìii	
3-MAR-2006 04:55	CHK	46.6000	ìii	
4-MAR-2006 06:02	CHK	45.2000	ìii	·
6-MAR-2006 05:01	CHK	45.8000	ı İİİ	
7-MAR-2006 04:57	CHK	46.6000	i i i	
8-MAR-2006 05:31	CHK	45.7000	ìii	

9-MAR-2006 05:30 CHK	46.4000
10-MAR-2006 05:36 CHK	45.0000
13-MAR-2006 05:08 CHK	45.9000
14-MAR-2006 04:54 CHK	45.5000
15-MAR-2006 05:03 CHK	45.9000
16-MAR-2006 04:53 CHK	46.4000
17-MAR-2006 05:35 CHK	46.3000
18-MAR-2006 07:07 CHK	45.7000
19-MAR-2006 07:09 CHK	45.6000
20-MAR-2006 04:58 CHK	45.7000
21-MAR-2006 04:55 CHK	46.3000
22-MAR-2006 05:30 CHK	46.3000
23-MAR-2006 05:28 CHK	45.5000
24-MAR-2006 05:02 CHK	46.0000
25-MAR-2006 07:03 CHK	46.2000
26-MAR-2006 06:54 bkg	No Value
26-MAR-2006 07:22 CHK	45.3000
27-MAR-2006 05:01 CHK	45.4000
28-MAR-2006 04:55 CHK	46.9000
29-MAR-2006 04:59 CHK	45.9000
30-MAR-2006 05:03 CHK	46.4000
31-MAR-2006 04:53 CHK	46.2000
O 12 A 37 12 TO 4 TO 11	D (((* 1) D

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-APR-2006 06:28	СНК	45.5000		No. and American
2-APR-2006 05:29	CHK	46.1000		
3-APR-2006 04:44	CHK	45.3000		
4-APR-2006 04:57	CHK	45.5000		
5-APR-2006 04:46	CHK	46.2000	i i i	
6-APR-2006 04:48	CHK	45.8000		
7-APR-2006 04:43	CHK	46.4000	i i Ì	
8-APR-2006 07:32	CHK	45.4000	i i i	
9-APR-2006 07:38	CHK	45.1000	i i i	
10-APR-2006 05:08	CHK	45.2000		
11-APR-2006 04:58	CHK	45.0000		
12-APR-2006 05:29	CHK	45.8000		

Quality Assurance Report. Generated 26-MAY-2006 11:36:46.41

QA Filename : \$DISK1:[QUAD3.QA]BKG_1.QAF;2

Description : quad 3a 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.240319 Std Deviation : 0.080718

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2000		
2-MAR-2006 03:57	BKG	0.1900		
3-MAR-2006 00:54	BKG	0.2500		
4-MAR-2006 02:23	BKG	0.3100		
4-MAR-2006 22:05	BKG	0.2000		
5-MAR-2006 22:23	BKG	0.2200		
7-MAR-2006 03:32	BKG	0.2100		
8-MAR-2006 03:03	BKG	0.2200		
9-MAR-2006 03:22	BKG	0.2300		
10-MAR-2006 01:31	BKG	0.2800		
11-MAR-2006 03:14		0.3100		
11-MAR-2006 19:23	BKG	0.2400		
12-MAR-2006 19:58	BKG	0.2300		
14-MAR-2006 02:20	BKG	0.2400		
15-MAR-2006 01:33	BKG	0.2400		
16-MAR-2006 03:14	BKG	0.2600		
17-MAR-2006 03:32	BKG	0.2600		
18-MAR-2006 04:19	BKG	0.2600		
18-MAR-2006 20:15	BKG	0.2200		
19-MAR-2006 19:38	BKG	0.1900		
21-MAR-2006 02:44	BKG	0.2400		
22-MAR-2006 01:35		0.2400		
23-MAR-2006 04:51	_	0.2400		
24-MAR-2006 02:43		0.3100		
25-MAR-2006 02:23		0.2200		
25-MAR-2006 20:29		0.2000	1 1 1	
26-MAR-2006 21:14		0.2000	1 1 1	
28-MAR-2006 03:48	_	0.2300		
29-MAR-2006 03:09	BKG	0.3300		

30-MAR-2006 02:56 BKG	0.2600 []
31-MAR-2006 02:08 BKG	0.2900
1-APR-2006 02:32 BKG	0.2000
1-APR-2006 20:32 BKG	0.2300
2-APR-2006 20:05 BKG	0.2200
4-APR-2006 02:32 BKG	0.2600
5-APR-2006 01:32 BKG	0.2100
6-APR-2006 04:02 BKG	0.2900
7-APR-2006 02:16 BKG	0.2700
8-APR-2006 02:46 BKG	0.1800
8-APR-2006 21:11 BKG	0.1700
9-APR-2006 21:26 BKG	0.2100

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Measurement Time	Sample ID			
11-APR-2006 03:09 12-APR-2006 02:48		0.2100 0.8300		= 3P not on this date

-- Multi-Test Full Report --

Description : quad 3b 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Manual

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.261968 Std Deviation : 0.056254

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2500		 -
2-MAR-2006 03:57	BKG	0.2800		
3-MAR-2006 00:54	BKG	0.2600	iii	
4-MAR-2006 02:23	BKG	0.2300	ÌÌÌ	
4-MAR-2006 22:05	BKG	0.2800	ÌÌÌ	
5-MAR-2006 22:23	BKG	0.2500		
7-MAR-2006 03:32	BKG	0.2400		
8-MAR-2006 03:03	BKG	0.2700		
9-MAR-2006 03:22	BKG	0.2900	ÌÌÌ	
10-MAR-2006 01:31	BKG	0.2300		
11-MAR-2006 03:14	BKG	0.2700		

11-MAR-2006 19:23 BKG	0.2700
12-MAR-2006 19:58 BKG	0.2100
14-MAR-2006 02:20 BKG	0.2500
15-MAR-2006 01:33 BKG	0.2000
16-MAR-2006 03:14 BKG	0.2800
17-MAR-2006 03:32 BKG	0.2700
18-MAR-2006 04:19 BKG	0.2200
18-MAR-2006 20:15 BKG	0.2500
19-MAR-2006 19:38 BKG	0.2600
21-MAR-2006 02:44 BKG	0.3200
22-MAR-2006 01:35 BKG	0.2300
23-MAR-2006 04:51 BKG	0.2900
24-MAR-2006 02:43 BKG	0.2500
25-MAR-2006 02:23 BKG	0.2200
25-MAR-2006 20:29 BKG	0.3100
26-MAR-2006 21:14 BKG	0.2400
28-MAR-2006 03:48 BKG	0.2700
29-MAR-2006 03:09 BKG	0.2400
30-MAR-2006 02:56 BKG	0.3300
31-MAR-2006 02:08 BKG	0.3100
1-APR-2006 02:32 BKG	0.2800
1-APR-2006 20:32 BKG	0.2700]
2-APR-2006 20:05 BKG	0.2800
4-APR-2006 02:32 BKG	0.3300
5-APR-2006 01:32 BKG	0.2400
6-APR-2006 04:02 BKG	0.2200
7-APR-2006 02:16 BKG	0.3100
8-APR-2006 02:46 BKG	0.2500
O 11 A 37 IV D OT U.S.	

Quality Assurance Multi-Test Full Report (co	ontinued)
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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
8-APR-2006 21:11 9-APR-2006 21:26	BKG	0.2400 0.2400		
11-APR-2006 03:09 12-APR-2006 02:48		0.2300 0.3500	, , ,	

Description : quad 3c 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.279255 Std Deviation : 0.037036

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.3000		
2-MAR-2006 03:57	BKG	0.3100		
3-MAR-2006 00:54	BKG ·	0.2900		and the second
4-MAR-2006 02:23	BKG	0.3000		
4-MAR-2006 22:05	BKG	0.2600		
5-MAR-2006 22:23	BKG	0.2300		
7-MAR-2006 03:32	BKG	0.2600		
8-MAR-2006 03:03	BKG	0.3000		
9-MAR-2006 03:22	BKG	0.2900		
10-MAR-2006 01:31	BKG	0.2700		
11-MAR-2006 03:14	BKG	0.2800		
11-MAR-2006 19:23	BKG	0.2500		,
12-MAR-2006 19:58	BKG	0.2500		•
14-MAR-2006 02:20	BKG	0.3100		•
15-MAR-2006 01:33	BKG	0.2700		
16-MAR-2006 03:14	_	0.3300		
17-MAR-2006 03:32	BKG	0.2800	1 1 1	
18-MAR-2006 04:19	BKG	0.2900		• •
18-MAR-2006 20:15	BKG	0.2300		
19-MAR-2006 19:38	BKG	0.2900		
21-MAR-2006 02:44	BKG	0.2700		
22-MAR-2006 01:35	BKG	0.2500		•
23-MAR-2006 04:51	BKG	0.2700		
24-MAR-2006 02:43		0.3200		
25-MAR-2006 02:23		0.2800	* ' '	
25-MAR-2006 20:29		0.3000		
26-MAR-2006 21:14		0.2200		•
28-MAR-2006 03:48		0.2800		
29-MAR-2006 03:09		0.2700		
30-MAR-2006 02:56		0.2600		
31-MAR-2006 02:08		0.2900		
1-APR-2006 02:32		0.3100		
1-APR-2006 20:32		0.2800		
2-APR-2006 20:05		0.2700		
4-APR-2006 02:32		0.2800		
5-APR-2006 01:32	BKG	0.2900		

6-APR-2006 04:02 BKG

0.2700 | | |

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-APR-2006 02:16	BKG	0.2900	 	
8-APR-2006 02:46	BKG	0.2500	iii	
8-APR-2006 21:11	BKG	0.2500		
9-APR-2006 21:26	BKG	0.2900		
11-APR-2006 03:09	BKG	0.2400		
12-APR-2006 02:48	BKG	0.3000		

-- Multi-Test Full Report --

Description : quad 3d 1"

: quad 3d 1" beta bkg, cpm

Parameter Units : cpm

Parameter Type : Manual

Investigate Level: 2.000000

Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.233936 Std Deviation : 0.037778

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2300)	.
2-MAR-2006 03:57	BKG	0.2900		
3-MAR-2006 00:54	BKG	0.2500	• i i i	
4-MAR-2006 02:23	BKG	0.2200	iii	ta a c
4-MAR-2006 22:05	BKG	0.2400		
5-MAR-2006 22:23	BKG	0.2500		
7-MAR-2006 03:32	BKG	0.2100	i i i	
8-MAR-2006 03:03	BKG	0.2800	i i i	
9-MAR-2006 03:22	BKG	0.2500	i i i	
10-MAR-2006 01:31	BKG	0.2500		
11-MAR-2006 03:14	BKG	0.2000	o iii	
11-MAR-2006 19:23	BKG	0.2100		
12-MAR-2006 19:58	BKG	0.1800		
14-MAR-2006 02:20) BKG	0.2300		
15-MAR-2006 01:33	BKG	0.2300		
16-MAR-2006 03:14	BKG	0.2600		
17-MAR-2006 03:32	2 BKG	0.2100	1 1 1	
18-MAR-2006 04:19	_	0.2400	1 1 1	

18-MAR-2006 20:15 BKG	0.2500
19-MAR-2006 19:38 BKG	0.2600
21-MAR-2006 02:44 BKG	0.2800
22-MAR-2006 01:35 BKG	0.2300
23-MAR-2006 04:51 BKG	0.2100
24-MAR-2006 02:43 BKG	0.2400
25-MAR-2006 02:23 BKG	0.2100
25-MAR-2006 20:29 BKG	0.2200
26-MAR-2006 21:14 BKG	0.2300
28-MAR-2006 03:48 BKG	0.2600
29-MAR-2006 03:09 BKG	0.2700
30-MAR-2006 02:56 BKG	0.2900
31-MAR-2006 02:08 BKG	0.2400
1-APR-2006 02:32 BKG	0.2400
1-APR-2006 20:32 BKG	0.2300
2-APR-2006 20:05 BKG	0.2100
4-APR-2006 02:32 BKG	0.2600

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
				·
5-APR-2006 01:32	BKG	0.2200		
6-APR-2006 04:02	BKG	0.2800		
7-APR-2006 02:16	BKG	0.2400		
8-APR-2006 02:46	BKG	0.2100		
8-APR-2006 21:11	BKG	0.2100		
9-APR-2006 21:26	BKG	0.2100		
11-APR-2006 03:09	BKG	0.2700		
12-APR-2006 02:48	BKG	0.2600		

Quality Assurance Report. Generated 26-MAY-2006 11:36:57.63

QA Filename : \$DISK1:[QUAD4.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : quad 4a 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 45.700001 Upper Bound : 48.900002

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 47.197559 Std Deviation : 0.539479

Measurement Time	Sample ID	•		LU SD UD BS Rej
1-MAR-2006 04:59	СНК	47.6000		
2-MAR-2006 05:04	CHK	47.3000	i i i	
3-MAR-2006 04:55	CHK	47.5000	lii	
4-MAR-2006 05:57	CHK	47.0000		
6-MAR-2006 04:56	CHK	47.2000		
7-MAR-2006 04:57	CHK	46.4000	111	
8-MAR-2006 05:31	CHK	46.4000		
9-MAR-2006 05:31	CHK	46.7000		
10-MAR-2006 05:36	CHK	46.9000		
13-MAR-2006 05:03	CHK	46.7000		
14-MAR-2006 04:49	CHK	46.3000		
15-MAR-2006 04:58	CHK	47.2000	111	
16-MAR-2006 04:53	CHK	46.4000		
17-MAR-2006 05:35	CHK	46.6000		
18-MAR-2006 07:07	CHK	46.6000	111	
19-MAR-2006 07:09	CHK	46.9000		
20-MAR-2006 04:58	CHK	46.7000		
21-MAR-2006 04:50	CHK	48.3000	In	
22-MAR-2006 05:30	CHK	47.6000	· i i i	
23-MAR-2006 05:29	CHK	46.1000	In	
24-MAR-2006 04:57	CHK	47.0000	- <u>i i i i</u>	

25-MAR-2006 07:08 CHK	47.1000
26-MAR-2006 07:17 CHK	46.3000
27-MAR-2006 05:01 CHK	46.6000
28-MAR-2006 04:55 CHK	48.5000 In
29-MAR-2006 04:59 CHK	46.7000
30-MAR-2006 05:03 CHK	47.0000
31-MAR-2006 04:53 CHK	47.2000
1-APR-2006 06:28 CHK	46.7000
2-APR-2006 05:24 CHK	46.6000
3-APR-2006 04:44 CHK	46.4000
4-APR-2006 04:52 CHK	46.6000
5-APR-2006 04:51 CHK	47.2000
6-APR-2006 04:48 CHK	46.8000
7-APR-2006 04:49 CHK	47.1000
8-APR-2006 07:32 CHK	47.6000
9-APR-2006 07:39 CHK	46.7000
10-APR-2006 05:08 CHK	46.1000 In
Quality Assurance Multi-Test Full 1	1 ! !
Quality 7135 and incomment 1051 1 and	report (commuca)
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
11 A DD 0007 04 50 CYTY	47.4000
11-APR-2006 04:58 CHK	47.4000
12-APR-2006 05:29 CHK	47.1000
Multi-Test Full Report	
D	. 66
Description : quad 4b 1" beta %	
Parameter Units: percent Pa	irameter Type : Manual
Lower/Upper Bounds Test P	
Lower Bound : 43.250000	Upper Bound : 46.399998
Investigate Level: 2.000000	Action Level : 3.000000
Sample Driven N-Sigma Tes Start Date : 1-JUL-2005 00:00	
Mean : 44.903660 Std	
Wear : 44.903000 Stu	Deviation . 0.330392
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 04:59 CHK	44.4000
2-MAR-2006 05:04 CHK	44.7000
3-MAR-2006 04:55 CHK	45.4000
J-141AIC-2000 04.33 CIIX	45.4000

1 -01 -	
4-MAR-2006 05:57 CHK	44.1000
6-MAR-2006 04:56 CHK	44.7000
7-MAR-2006 04:57 CHK	44.3000
8-MAR-2006 05:31 CHK	43.8000 In
9-MAR-2006 05:31 CHK	44.5000
10-MAR-2006 05:36 CHK	45.0000
13-MAR-2006 05:03 CHK	44.0000
14-MAR-2006 04:49 CHK	44.1000
15-MAR-2006 04:58 CHK	44.7000
16-MAR-2006 04:53 CHK	45.6000
17-MAR-2006 05:35 CHK	44.9000
18-MAR-2006 07:07 CHK	44.9000
19-MAR-2006 07:09 CHK	44.6000
20-MAR-2006 04:58 CHK	44.0000
21-MAR-2006 04:50 CHK	45.4000
22-MAR-2006 05:30 CHK	44.7000
23-MAR-2006 05:29 CHK	44.2000
24-MAR-2006 04:57 CHK	44.5000
25-MAR-2006 07:08 CHK	44.9000
26-MAR-2006 07:17 CHK	44.2000
27-MAR-2006 05:01 CHK	45.2000
28-MAR-2006 04:55 CHK	46.0000
29-MAR-2006 04:59 CHK	45.4000
30-MAR-2006 05:03 CHK	44.1000
31-MAR-2006 04:53 CHK	44.7000
1-APR-2006 06:28 CHK	43.8000 In
2-APR-2006 05:24 CHK	44.4000
3-APR-2006 04:44 CHK	44.8000
4-APR-2006 04:52 CHK	45.1000
5-APR-2006 04:51 CHK	44.6000
6-APR-2006 04:48 CHK	45.6000
7-APR-2006 04:49 CHK	45.2000
8-APR-2006 07:32 CHK	44.9000
Quality Assurance Multi-Test Ful	ll Report (continued) Page : 3

		LU SD UD BS Rej
9-APR-2006 07:39 CHK 10-APR-2006 05:08 CHK	44.6000 44.8000	

44.3000

11-APR-2006 04:58 CHK

¹²⁻APR-2006 05:29 CHK 45.3000 | | |

⁻⁻ Multi-Test Full Report --

Description : quad 4c 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 41.299999 Upper Bound : 45.400002

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 43.313251 Std Deviation : 0.679174

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	43.6000		
2-MAR-2006 05:04	CHK	43.8000	iii	
3-MAR-2006 04:55	CHK	44.6000		
4-MAR-2006 05:57	CHK	44.0000		
6-MAR-2006 04:56	CHK	44.4000		
7-MAR-2006 04:57	CHK	42.8000		
8-MAR-2006 05:31	CHK	42.4000		
9-MAR-2006 05:31	CHK	43.0000		
10-MAR-2006 05:36	CHK	42.7000)	
13-MAR-2006 05:03	CHK	44.1000)	
14-MAR-2006 04:49	CHK	41.5000) In	
15-MAR-2006 04:58	CHK	42.5000)	
16-MAR-2006 04:53	CHK	43.1000)	
17-MAR-2006 05:35	CHK	43.0000)	
18-MAR-2006 07:07	_	43.4000	1 1 1	
19-MAR-2006 07:09		42.6000	1 1 1	
20-MAR-2006 04:58		43.2000	1 1 1	
21-MAR-2006 04:50	CHK	43.7000)	
22-MAR-2006 05:30	CHK	43.8000)	
23-MAR-2006 05:29	CHK	42.3000)	
24-MAR-2006 04:57	CHK	44.0000)	
25-MAR-2006 07:08	CHK	43.1000)	
26-MAR-2006 07:17	CHK	42.7000)	
27-MAR-2006 05:01	CHK	42,5000)	
28-MAR-2006 04:55	CHK	44.1000)	
29-MAR-2006 04:59	CHK	44.0000)	
30-MAR-2006 05:03	CHK	42.5000)	
31-MAR-2006 04:53	CHK	43.4000)	

1-APR-2006 06:28 CHK	43.6000
2-APR-2006 05:24 CHK	42.5000
3-APR-2006 04:44 CHK	42.8000
4-APR-2006 04:52 CHK	43.6000
5-APR-2006 04:51 CHK	43.5000
6-APR-2006 04:48 CHK	43.0000

Quality Assurance Multi-Test Full Report (continued)

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7-APR-2006 04:49	CUV	42.5000	 	
8-APR-2006 07:32		43.5000		
9-APR-2006 07:39		43.0000		
10-APR-2006 05:08	CHK	43.7000		
11-APR-2006 04:58		43.2000		
12-APR-2006 05:29	CHK	43.0000)	

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-- Multi-Test Full Report --

Description : quad 4d 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 42.070000 Upper Bound : 45.700001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 43.883537 Std Deviation : 0.603698

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:59	СНК	44.1000)	
2-MAR-2006 05:04	CHK	44.6000)	
3-MAR-2006 04:55	CHK	44.2000)	
4-MAR-2006 05:57	CHK	44.0000)	
6-MAR-2006 04:56	CHK	43.6000		
7-MAR-2006 04:57	CHK	43.9000)	
8-MAR-2006 05:31	CHK	42.7000)	
9-MAR-2006 05:31	CHK	43.2000)	
10-MAR-2006 05:36	CHK	43.000	0	
13-MAR-2006 05:03	CHK	43.500	0	

14-MAR-2006 04:49 CHK	43.3000
15-MAR-2006 04:58 CHK	43.8000
16-MAR-2006 04:53 CHK	43.9000
17-MAR-2006 05:35 CHK	44.2000
18-MAR-2006 07:07 CHK	42.8000
19-MAR-2006 07:09 CHK	43.3000
20-MAR-2006 04:58 CHK	43.9000
21-MAR-2006 04:50 CHK	44.8000
22-MAR-2006 05:30 CHK	43.7000
23-MAR-2006 05:29 CHK	43.8000
24-MAR-2006 04:57 CHK	43.2000
25-MAR-2006 07:08 CHK	43.6000
26-MAR-2006 07:17 CHK	43.1000
27-MAR-2006 05:01 CHK	43.0000
28-MAR-2006 04:55 CHK	45.0000
29-MAR-2006 04:59 CHK	45.2000 In
30-MAR-2006 05:03 CHK	43.9000
31-MAR-2006 04:53 CHK	44.6000
1-APR-2006 06:28 CHK	43.6000
2-APR-2006 05:24 CHK	44.0000
3-APR-2006 04:44 CHK	44.2000
4-APR-2006 04:52 CHK	43.1000
O 12 A 34 12 T 4 E	11 D (/ / 1) D

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
5-APR-2006 04:51	CHK	44.2000		
6-APR-2006 04:48	CHK	43.4000		
7-APR-2006 04:49	CHK	43.2000		
8-APR-2006 07:32	CHK	43.4000		
9-APR-2006 07:39	CHK	43.1000		
10-APR-2006 05:08	CHK	42.9000		
11-APR-2006 04:58	CHK	44.4000		
12-APR-2006 05:29	CHK	42.4000	In	

Quality Assurance Report.

Generated 26-MAY-2006 11:36:58.79

QA Filename : \$DISK1:[QUAD4.QA]BKG_1.QAF;2

-- Multi-Test Full Report --

Description : quad 4a 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.345842 Std Deviation : 0.075943

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.3000		
2-MAR-2006 03:57	BKG	0.3400		
3-MAR-2006 02:20	BKG	0.3100		
4-MAR-2006 02:28	BKG	0.3400		
4-MAR-2006 22:05	BKG	0.3100		
5-MAR-2006 22:28	BKG	0.3300		
7-MAR-2006 02:22	BKG	0.3200		
8-MAR-2006 03:03	BKG	0.3200		
9-MAR-2006 02:37	BKG	0.4500		
10-MAR-2006 01:32	BKG	0.3400		
11-MAR-2006 03:14	BKG	0.2600		
11-MAR-2006 19:23	BKG	0.2600		
12-MAR-2006 19:58	BKG	0.2400		
14-MAR-2006 03:26	BKG	0.3600		
15-MAR-2006 01:33	BKG	0.2200		
16-MAR-2006 03:14	BKG	0.3300		
17-MAR-2006 03:37	BKG	0.3400		
18-MAR-2006 04:19	BKG	0.2700		
18-MAR-2006 20:15	BKG	0.2700	111	
19-MAR-2006 19:38	BKG	0.2800		
21-MAR-2006 02:44	BKG	0.3400		
22-MAR-2006 01:40	BKG	0.3000		
23-MAR-2006 04:51	BKG	0.3000		
24-MAR-2006 02:43	BKG	0.2800		
25-MAR-2006 02:23	BKG	0.3600		
25-MAR-2006 20:29	BKG	0.3300		
26-MAR-2006 21:19	BKG	0.2700	1	
28-MAR-2006 03:49	BKG	0.4700		
29-MAR-2006 03:09	BKG	0.5600	In	
30-MAR-2006 02:56	BKG	0.3700		
31-MAR-2006 02:09	BKG	0.3800		
1-APR-2006 02:32 I	BKG	0.3800		
1-APR-2006 20:32 I	BKG	0.3000		

2-APR-2006 20:05 BKG	0.2200
4-APR-2006 02:32 BKG	0.3600
5-APR-2006 01:38 BKG	0.3200
6-APR-2006 04:03 BKG	0.4400
7-APR-2006 02:22 BKG	0.3200
8-APR-2006 02:21 BKG	0.2800
8-APR-2006 21:12 BKG	0.2900
9-APR-2006 21:26 BKG	0.2900

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
11-APR-2006 02:24 12-APR-2006 02:43	_	0.2900 0.3700		

-- Multi-Test Full Report --

Description : quad 4b 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.259471 Std Deviation : 0.053889

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2400		
2-MAR-2006 03:57	BKG	0.2300		
3-MAR-2006 02:20	BKG	0.2200	ÌÌÌ	
4-MAR-2006 02:28	BKG	0.2300	i i i	
4-MAR-2006 22:05	BKG	0.2300	iii	
5-MAR-2006 22:28	BKG	0.2200	ÌÌÌ	
7-MAR-2006 02:22	BKG	0.2700		
8-MAR-2006 03:03	BKG	0.2700		·
9-MAR-2006 02:37	BKG	0.2800	iii	
10-MAR-2006 01:32	BKG	0.2900		
11-MAR-2006 03:14	BKG	0.2600	i i i	
11-MAR-2006 19:23	BKG	0.2200		
12-MAR-2006 19:58	BKG	0.2300		
14-MAR-2006 03:26	BKG	0.2700		
15-MAR-2006 01:33	BKG	0.2100		

16-MAR-2006 03:14 BKG	0.2900
17-MAR-2006 03:37 BKG	0.2500
18-MAR-2006 04:19 BKG	0.2900
18-MAR-2006 20:15 BKG	0.2200
19-MAR-2006 19:38 BKG	0.2400
21-MAR-2006 02:44 BKG	0.3100
22-MAR-2006 01:40 BKG	0.2100
23-MAR-2006 04:51 BKG	0.2400
24-MAR-2006 02:43 BKG	0.2800
25-MAR-2006 02:23 BKG	0.2500
25-MAR-2006 20:29 BKG	0.2300
26-MAR-2006 21:19 BKG	0.2500
28-MAR-2006 03:49 BKG	0.2600
29-MAR-2006 03:09 BKG	0.3100
30-MAR-2006 02:56 BKG	0.2500
31-MAR-2006 02:09 BKG	0.3500
1-APR-2006 02:32 BKG	0.2500
1-APR-2006 20:32 BKG	0.2600
2-APR-2006 20:05 BKG	0.2400
4-APR-2006 02:32 BKG	0.3000
5-APR-2006 01:38 BKG	0.2700
6-APR-2006 04:03 BKG	0.4200 In
7-APR-2006 02:22 BKG	0.2900
8-APR-2006 02:21 BKG	0.2700
Quality Assurance Multi-Test Full Re	nort (continued)

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
8-APR-2006 21:12	BKG	0.2500	1	-
9-APR-2006 21:26	BKG	0.2500		
11-APR-2006 02:24	BKG	0.3200		
12-APR-2006 02:43	BKG	0.3100		

-- Multi-Test Full Report --

Description : quad 4c 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.264286 Std Deviation : 0.037815

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2700		
2-MAR-2006 03:57		0.3100	iii	
3-MAR-2006 02:20		0.3100	iii	
4-MAR-2006 02:28		0.2600		
4-MAR-2006 22:05	BKG	0.3000		
5-MAR-2006 22:28	BKG	0.2700	iii	
7-MAR-2006 02:22	BKG	0.2500	iii	
8-MAR-2006 03:03	BKG	0.2300	iii	
9-MAR-2006 02:37	BKG	0.3200	iii	
10-MAR-2006 01:32	BKG	0.2600		
11-MAR-2006 03:14	BKG	0.2400	111	
11-MAR-2006 19:23	BKG	0.2800	iii	
12-MAR-2006 19:58	BKG	0.2500	iii	
14-MAR-2006 03:26	BKG	0.2900	ìii	
15-MAR-2006 01:33	BKG	0.3100	ìii	
16-MAR-2006 03:14	BKG	0.3400	In	
17-MAR-2006 03:37	BKG	0.2500	· i i i	
18-MAR-2006 04:19	BKG	0.2600	i i i	
18-MAR-2006 20:15	BKG	0.2700	+ ÎÌÌ	
19-MAR-2006 19:38	BKG	0.2600	ĹĹĹ	
21-MAR-2006 02:44	BKG	0.3000	ĹĹĹ	
22-MAR-2006 01:40	BKG	0.2700		
23-MAR-2006 04:51	BKG	0.2400	111	
24-MAR-2006 02:43	BKG	0.2600	i i i	•
25-MAR-2006 02:23	BKG	0.2600	111	
25-MAR-2006 20:29	BKG	0.2600		
26-MAR-2006 21:19	BKG	0.2400		
28-MAR-2006 03:49	BKG	0.3100		
29-MAR-2006 03:09	BKG	0.3300		
30-MAR-2006 02:56	BKG	0.3100		
31-MAR-2006 02:09	BKG	0.2700		
1-APR-2006 02:32	BKG	0.3200		
1-APR-2006 20:32	BKG	0.2600		
2-APR-2006 20:05	BKG	0.2500		
4-APR-2006 02:32	BKG	0.3100		
5-APR-2006 01:38	BKG	0.2400		
6-APR-2006 04:03	BKG	0.3400	In	
Quality Assurance M	ulti-Test Full	Report (continued)		Page: 4

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

7-APR-2006 02:22 BKG	0.2200
8-APR-2006 02:21 BKG	0.2500
8-APR-2006 21:12 BKG	0.2600
9-APR-2006 21:26 BKG	0.2900
11-APR-2006 02:24 BKG	0.2500
12-APR-2006 02:43 BKG	0.2900

-- Multi-Test Full Report --

Description : quad 4d 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.266878 Std Deviation : 0.031946

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:38	BKG	0.2900		·
2-MAR-2006 03:57	BKG	0.2400		
3-MAR-2006 02:20	BKG	0.2800		
4-MAR-2006 02:28	BKG	0.2900		
4-MAR-2006 22:05	BKG	0.2600		
5-MAR-2006 22:28	BKG	0.3100		
7-MAR-2006 02:22	BKG	0.3200]	
8-MAR-2006 03:03	BKG	0.2700		
9-MAR-2006 02:37	BKG	0.2900		
10-MAR-2006 01:32	BKG	0.2900		
11-MAR-2006 03:14	BKG	0.2700		
11-MAR-2006 19:23	BKG	0.2900		
12-MAR-2006 19:58	BKG	0.2700		
14-MAR-2006 03:26	BKG	0.3200		
15-MAR-2006 01:33	BKG	0.2400)	
16-MAR-2006 03:14	BKG	0.3200		
17-MAR-2006 03:37	BKG	0.2500		
18-MAR-2006 04:19	BKG	0.2300		
18-MAR-2006 20:15	BKG	0.2800		
19-MAR-2006 19:38	BKG	0.2700		
21-MAR-2006 02:44	BKG	0.2800		
22-MAR-2006 01:40	BKG	0.2900		

23-MAR-2006 04:51 BKG	0.3500	In
24-MAR-2006 02:43 BKG	0.3000	
25-MAR-2006 02:23 BKG	0.3000	
25-MAR-2006 20:29 BKG	0.2900	
26-MAR-2006 21:19 BKG	0.3100	
28-MAR-2006 03:49 BKG	0.2700	
29-MAR-2006 03:09 BKG	0.2700	
30-MAR-2006 02:56 BKG	0.3100	
31-MAR-2006 02:09 BKG	0.3400	In
1-APR-2006 02:32 BKG	0.2800	
1-APR-2006 20:32 BKG	0.3000	
2-APR-2006 20:05 BKG	0.2300]
4-APR-2006 02:32 BKG	0.3300	

Quality Assurance Multi-Test Full Report (continued)

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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS R	ej	
5-APR-2006 01:38	BKG	0.2500	 			
6-APR-2006 04:03	_	0.3900	Ac			
7-APR-2006 02:22	BKG	0.2400				
8-APR-2006 02:21	BKG	0.2500				
8-APR-2006 21:12	BKG	0.3300				
9-APR-2006 21:26	BKG	0.2600				-n+.
11-APR-2006 02:24	BKG	0.3100			. 0	4 not
12-APR-2006 02:43	BKG	0.4100	Ac		1 -	Ų,

Quality Assurance Report. Generated 26-MAY-2006 11:37:07.94

QA Filename : \$DISK1:[QUAD7.QA]CHK.QAF;2

-- Multi-Test Full Report --

Description : quad 7a 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 42.000000 Upper Bound : 44.540001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 43.265854 Std Deviation : 0.424905

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:54	СНК	43.5000		
2-MAR-2006 05:05	CHK	43.3000		
3-MAR-2006 05:00	CHK	43.9000		
4-MAR-2006 05:57	CHK	43.7000		
6-MAR-2006 04:56	CHK	43.1000		
7-MAR-2006 04:52	CHK	43.1000		
8-MAR-2006 05:32	CHK	42.5000		
9-MAR-2006 05:31	CHK	42.9000		
10-MAR-2006 05:36	CHK	43.3000)	
12-MAR-2006 07:37	CHK	43.0000)	
13-MAR-2006 05:08	CHK	43.8000)	
14-MAR-2006 04:54	CHK	42.7000)	
15-MAR-2006 04:59	CHK	42.6000)	
16-MAR-2006 04:48	CHK	43.3000)	
17-MAR-2006 05:35	CHK	42.6000	0	
18-MAR-2006 07:08	CHK	43.1000)	
20-MAR-2006 04:58	CHK	43.4000)	
21-MAR-2006 04:55	CHK	43.5000	0	
22-MAR-2006 05:31	CHK	43.0000	0	
23-MAR-2006 05:29	CHK	43.1000)	
24-MAR-2006 05:02	CHK	43.6000)	

	42.5000
25-MAR-2006 07:08 CHK	43.5000
27-MAR-2006 04:57 CHK	42.6000
28-MAR-2006 04:50 CHK	43.8000
29-MAR-2006 04:59 CHK	43.6000
30-MAR-2006 04:58 CHK	42.9000
31-MAR-2006 04:53 CHK	43.7000
1-APR-2006 06:24 CHK	42.4000 In
3-APR-2006 04:44 CHK	43.1000
4-APR-2006 04:52 CHK	43.2000
5-APR-2006 05:05 CHK	41.9000 Be Ac
6-APR-2006 04:48 CHK	43.2000
7-APR-2006 04:44 CHK	42.8000
8-APR-2006 07:33 CHK	43.7000
9-APR-2006 07:39 CHK	43.2000
10-APR-2006 05:08 CHK	42.7000
11-APR-2006 04:58 CHK	42.4000 In
12-APR-2006 05:30 CHK	42.0000 In
Multi-Test Full Report	
Description : quad 7b 1" beta %	eff
Parameter Units : percent Pa	
Turamoter omis . porocit	dumeter Type . Generic
Lower/Upper Bounds Test P	arameters
• •	Upper Bound : 46.299999
13.10002	Spp. 20 and 1 10,255,755
Investigate Level: 2.000000	Action Level : 3.000000
Sample Driven N-Sigma Tes	t Parameters
Start Date : 1-JUL-2005 00:00	
Mean : 44.839024 Std	
Wear . 44.057024 Std	Deviation . 0.401027
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
	Report (continued) Page: 2
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 04:54 CHK	45.2000
2-MAR-2006 05:05 CHK	44.9000
3-MAR-2006 05:00 CHK	45.6000
4-MAR-2006 05:57 CHK	45.2000
6-MAR-2006 04:56 CHK	44.3000

7-MAR-2006 04:52 CHK	44.9000
8-MAR-2006 05:32 CHK	45.2000
9-MAR-2006 05:31 CHK	44.6000
10-MAR-2006 05:36 CHK	45.0000
12-MAR-2006 07:37 CHK	45.3000
13-MAR-2006 05:08 CHK	44.4000
14-MAR-2006 04:54 CHK	45.3000
15-MAR-2006 04:59 CHK	44.9000
16-MAR-2006 04:48 CHK	44.9000
17-MAR-2006 05:35 CHK	44.5000
18-MAR-2006 07:08 CHK	44.8000
20-MAR-2006 04:58 CHK	44.1000
21-MAR-2006 04:55 CHK	44.6000
22-MAR-2006 05:31 CHK	44.6000
23-MAR-2006 05:29 CHK	45.5000
24-MAR-2006 05:02 CHK	44.4000
25-MAR-2006 07:08 CHK	44.5000
27-MAR-2006 04:57 CHK	44.6000
28-MAR-2006 04:50 CHK	44.4000
29-MAR-2006 04:59 CHK	45.3000
30-MAR-2006 04:58 CHK	44.2000
31-MAR-2006 04:53 CHK	44.5000
1-APR-2006 06:24 CHK	45.0000
3-APR-2006 04:44 CHK	44.0000
4-APR-2006 04:52 CHK	44.7000
5-APR-2006 05:05 CHK	45.0000
6-APR-2006 04:48 CHK	44.8000
7-APR-2006 04:44 CHK	43.4000 In
8-APR-2006 07:33 CHK	45.7000
9-APR-2006 07:39 CHK	45.0000
10-APR-2006 05:08 CHK	45.3000
11-APR-2006 04:58 CHK	44.9000
12-APR-2006 05:30 CHK	44.1000

-- Multi-Test Full Report --

Description : quad 7c 1" beta %eff

Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 38.619999 Upper Bound : 43.060001

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 40.844910 Std Deviation : 0.739721

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 04:54	CHK	40.0000		
2-MAR-2006 05:05	CHK	40.6000		
3-MAR-2006 05:00	CHK	39.4000		
4-MAR-2006 05:57	CHK	40.4000		
6-MAR-2006 04:56	CHK	40.0000		
7-MAR-2006 04:52	CHK	40.4000		
8-MAR-2006 05:32	CHK	39.2000	In	
9-MAR-2006 05:31	CHK	40.0000		
10-MAR-2006 05:36	CHK	40.3000)	
12-MAR-2006 07:37	CHK	40.3000)	
13-MAR-2006 05:08	CHK	39.8000)	
14-MAR-2006 04:54	CHK	40.1000)	
15-MAR-2006 04:59	CHK	41.1000)	
16-MAR-2006 04:48	CHK	39.8000)	
17-MAR-2006 05:35	CHK	40.5000)	
18-MAR-2006 07:08	CHK	39.2000	In	
20-MAR-2006 04:58	CHK	40.0000)	
21-MAR-2006 04:55	CHK	40.8000)	
22-MAR-2006 05:31	CHK	40.2000	1 1 1	
23-MAR-2006 05:29	CHK	40.8000)	
24-MAR-2006 05:02	CHK	40.0000	1 1 1	
25-MAR-2006 07:08	CHK	41.0000)	
27-MAR-2006 04:57	CHK	40.2000)	
28-MAR-2006 04:50	CHK	40.8000)	
29-MAR-2006 04:59	CHK	41.4000)	
30-MAR-2006 04:58	CHK	39.9000)	
31-MAR-2006 04:53	CHK	40.9000)	
1-APR-2006 06:24	CHK	40.5000		
3-APR-2006 04:44	CHK	38.4000	Be Ac	
4-APR-2006 04:52	CHK	39.5000		
5-APR-2006 05:05	CHK	39.8000		
6-APR-2006 04:48	CHK	39.4000		

file:///P /Transfer/qa1_gpc7_26-may-2006-11371020.tx	t
7-APR-2006 04:44 CHK 8-APR-2006 07:33 CHK 9-APR-2006 07:39 CHK	38.6000 Be Ac 39.7000 39.8000
10-APR-2006 05:08 CHK	39.8000
11-APR-2006 04:58 CHK	40.0000
12-APR-2006 05:30 CHK	39.6000
Multi-Test Full Report	
Description : quad 7d 1" beta %e Parameter Units : percent Par	
Lower/Upper Bounds Test Pa Lower Bound : 17.680000 U	
Investigate Level: 2.000000 Ac	etion Level : 3.000000
-	
Start Date : 1-JUL-2005 00:00 E Mean : 34.890854 Std I	End Date : 1-JAN-2006 00:00
Measurement Time Sample ID	Sample Analyst Value LU SD UD BS Rej
Measurement Time Sample ID S Quality Assurance Multi-Test Full Re	
Quality Assurance Multi-Test Full Re	
Quality Assurance Multi-Test Full Re	eport (continued) Page : 4
Quality Assurance Multi-Test Full Roman Measurement Time Sample ID	eport (continued) Page : 4 Sample Analyst Value LU SD UD BS Rej
Quality Assurance Multi-Test Full Roman Measurement Time Sample ID Sample ID 1-MAR-2006 04:54 CHK	eport (continued) Page : 4 Sample Analyst Value LU SD UD BS Rej
Quality Assurance Multi-Test Full Roman Measurement Time Sample ID	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000
Quality Assurance Multi-Test Full Roman Measurement Time Sample ID	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000
Quality Assurance Multi-Test Full Resourcement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000
Quality Assurance Multi-Test Full Resolvent Time Sample ID Sample	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 31.4000
Quality Assurance Multi-Test Full Researce Mul	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 29.8000
Quality Assurance Multi-Test Full Remains Measurement Time Sample ID Sample	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 29.8000 31.2000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 29.8000 31.2000 43.5000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 31.4000 31.2000 43.5000 30.0000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 31.4000 42.1000 31.4000 31.2000 43.5000 43.5000 29.9000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 31.4000 31.4000 31.2000 43.5000 30.0000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000 31.7000 42.1000 30.5000 31.4000 30.3000 31.4000 29.8000 31.2000 31.2000 30.0000 30.0000 30.2000
Quality Assurance Multi-Test Full Resolution Measurement Time Sample ID Samp	Page : 4 Sample Analyst Value LU SD UD BS Rej 30.8000

20-MAR-2006 04:58 CHK	31.2000
21-MAR-2006 04:55 CHK	31.4000
22-MAR-2006 05:31 CHK	30.6000
23-MAR-2006 05:29 CHK	29.7000
24-MAR-2006 05:02 CHK	31.8000
25-MAR-2006 07:08 CHK	32.2000
27-MAR-2006 04:57 CHK	30.4000
28-MAR-2006 04:50 CHK	37.0000
29-MAR-2006 04:59 CHK	36.8000
30-MAR-2006 04:58 CHK	31.8000
31-MAR-2006 04:53 CHK	33.0000
1-APR-2006 06:24 CHK	43.6000
3-APR-2006 04:44 CHK	43.3000
4-APR-2006 04:52 CHK	30.7000
5-APR-2006 05:05 CHK	31.4000
6-APR-2006 04:48 CHK	31.1000
7-APR-2006 04:44 CHK	43.4000
8-APR-2006 07:33 CHK	43.4000
9-APR-2006 07:39 CHK	43.9000
10-APR-2006 05:08 CHK	32.3000
11-APR-2006 04:58 CHK	31.8000
12-APR-2006 05:30 CHK	28.5000

Quality Assurance Report. Generated 26-MAY-2006 11:37:09.27

QA Filename : \$DISK1:[QUAD7.QA]BKG_1.QAF;2

-- Multi-Test Full Report --

Description : quad 7a 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.734474 Std Deviation : 0.058613

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:35	BKG	0.7900	 	
2-MAR-2006 03:59	BKG	0.7200		

3-MAR-2006 02:25 BKG	0.7000	
4-MAR-2006 02:29 BKG	0.7800	
4-MAR-2006 22:06 BKG	0.8000	
5-MAR-2006 22:29 BKG	0.7400	
7-MAR-2006 03:27 BKG	0.7000	
8-MAR-2006 03:03 BKG	0.7700	
9-MAR-2006 03:18 BKG	0.7600	
10-MAR-2006 01:32 BKG	0.7400	
11-MAR-2006 03:14 BKG	0.8100	
11-MAR-2006 19:24 BKG	0.7400	
12-MAR-2006 19:59 BKG	0.7700	
14-MAR-2006 03:26 BKG	0.7500	İİİ
15-MAR-2006 01:38 BKG	0.6000	In
16-MAR-2006 03:10 BKG	0.7200	
17-MAR-2006 01:12 BKG	0.6500	
18-MAR-2006 04:20 BKG	0.7400	ΪÌÌ
18-MAR-2006 20:15 BKG	0.8200	İİİ
19-MAR-2006 19:38 BKG	0.7900	ÌÌÌ
21-MAR-2006 02:49 BKG	0.8400	ÌÌÌ
22-MAR-2006 01:41 BKG	0.7400	İÌÌ
23-MAR-2006 02:31 BKG	0.6800	
24-MAR-2006 02:49 BKG	0.7200	
25-MAR-2006 02:19 BKG	0.7600	
25-MAR-2006 20:30 BKG	0.8500	
26-MAR-2006 21:20 BKG	0.6500	
28-MAR-2006 03:49 BKG	0.8300	
29-MAR-2006 03:05 BKG	0.8000	
30-MAR-2006 02:56 BKG	0.7500	
31-MAR-2006 02:09 BKG	0.7600	
1-APR-2006 02:33 BKG	0.8000	
1-APR-2006 20:33 BKG	0.7700	ÌÌ
2-APR-2006 20:06 BKG	0.6800	
4-APR-2006 02:32 BKG	0.7700	
5-APR-2006 01:39 BKG	0.7200	
6-APR-2006 03:59 BKG	0.7400	
7-APR-2006 02:22 BKG	0.8000	
8-APR-2006 04:17 BKG	0.6600	
8-APR-2006 21:12 BKG	0.7500	
9-APR-2006 21:26 BKG	0.7600	
Quality Assurance Multi-Test Full Report	(continued)	

Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

11-APR-2006 02:10 BKG	0.7400	
12-APR-2006 02:44 BKG	0.7600	$ \cdot $

-- Multi-Test Full Report --

Description : quad 7b 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.723632 Std Deviation : 0.057219

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:35	BKG	0.8000		
2-MAR-2006 03:59	BKG	0.7200		
3-MAR-2006 02:25	BKG	0.7400		
4-MAR-2006 02:29	BKG	0.8000		
4-MAR-2006 22:06	BKG	0.7300		
5-MAR-2006 22:29	BKG	0.7400		
7-MAR-2006 03:27	_	0.7800	1 1 1	
8-MAR-2006 03:03		0.7400		
9-MAR-2006 03:18		0.7300		
10-MAR-2006 01:32		0.8000	1 1 1	
11-MAR-2006 03:14		0.7900	1 1 1	
11-MAR-2006 19:24		0.7400	1 1 (
12-MAR-2006 19:59		0.7300		
14-MAR-2006 03:26		0.7200		
15-MAR-2006 01:38		0.7000	1 1 1	
16-MAR-2006 03:10	_	0.7400	1 1 +	
17-MAR-2006 01:12		0.6500	' ' '	
18-MAR-2006 04:20		0.6800		
18-MAR-2006 20:15		0.7300	1 1 1	
19-MAR-2006 19:38		0.7100	1 1 1	
21-MAR-2006 02:49	_	0.8000	1 ; 1	
22-MAR-2006 01:41	_	0.7000	1 1 1	
23-MAR-2006 02:31		0.7200		
24-MAR-2006 02:49		0.8000		
25-MAR-2006 02:19		0.6400		
25-MAR-2006 20:30	_	0.8100		
26-MAR-2006 21:20	BKG	0.6500)	

28-MAR-2006 03:49 BKG	0.8000
29-MAR-2006 03:05 BKG	0.8000
30-MAR-2006 02:56 BKG	0.7500
31-MAR-2006 02:09 BKG	0.6800
1-APR-2006 02:33 BKG	0.7500
1-APR-2006 20:33 BKG	0.7600
2-APR-2006 20:06 BKG	0.7000
4-APR-2006 02:32 BKG	0.7900
5-APR-2006 01:39 BKG	0.7600
6-APR-2006 03:59 BKG	0.7800
7-APR-2006 02:22 BKG	0.7000
8-APR-2006 04:17 BKG	0.7300

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time San	nple ID Sample Ar	alyst	Value	LU SD UD BS Rej
8-APR-2006 21:12 BKG		0.7600		
9-APR-2006 21:26 BKG		0.8300		
11-APR-2006 02:10 BKC	j	0.7300		
12-APR-2006 02:44 BKC	້	0.7300		

-- Multi-Test Full Report --

Description : quad 7c 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.737188 Std Deviation : 0.120272

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:35	BKG	0.7500		 -
2-MAR-2006 03:59	BKG	0.6900	iii	
3-MAR-2006 02:25	BKG	0.6600		
4-MAR-2006 02:29	BKG	0.7100		
4-MAR-2006 22:06	BKG	0.7600		
5-MAR-2006 22:29	BKG	0.6800		
7-MAR-2006 03:27	BKG	0.7700		
8-MAR-2006 03:03	BKG	0.7600		
9-MAR-2006 03:18	BKG	0.7800		

10-MAR-2006 01:32 BKG	0.7100
11-MAR-2006 03:14 BKG	0.8100
11-MAR-2006 19:24 BKG	0.7400
12-MAR-2006 19:59 BKG	0.7800
14-MAR-2006 03:26 BKG	0.7200
15-MAR-2006 01:38 BKG	0.7600
16-MAR-2006 03:10 BKG	0.7700
17-MAR-2006 01:12 BKG	0.6500
18-MAR-2006 04:20 BKG	0.7500
18-MAR-2006 20:15 BKG	0.7600
19-MAR-2006 19:38 BKG	0.7100
21-MAR-2006 02:49 BKG	0.8400
22-MAR-2006 01:41 BKG	0.7800
23-MAR-2006 02:31 BKG	0.7200
24-MAR-2006 02:49 BKG	0.6900
25-MAR-2006 02:19 BKG	0.8100
25-MAR-2006 20:30 BKG	0.7000
26-MAR-2006 21:20 BKG	0.8200
28-MAR-2006 03:49 BKG	0.7700
29-MAR-2006 03:05 BKG	0.8500
30-MAR-2006 02:56 BKG	0.6100
31-MAR-2006 02:09 BKG	0.8400
1-APR-2006 02:33 BKG	0.8100
1-APR-2006 20:33 BKG	0.7900
2-APR-2006 20:06 BKG	0.7800
4-APR-2006 02:32 BKG	0.8300
5-APR-2006 01:39 BKG	0.8600
6-APR-2006 03:59 BKG	0.7900

Quality Assurance Multi-Test Full Report (continued)

Page: 4

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
7 ADD 2007 02 22	DLC	0.000		
7-APR-2006 02:22		0.8000		
8-APR-2006 04:17		0.8300		
8-APR-2006 21:12		0.8000		
9-APR-2006 21:26	BKG	0.7800		
11-APR-2006 02:10	BKG	0.8100		
12-APR-2006 02:44	BKG	0.7900		

-- Multi-Test Full Report --

Description : quad 7d 1" beta bkg, cpm

Parameter Units : cpm Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2005 00:00 End Date : 1-JAN-2006 00:00

Mean : 0.616895 Std Deviation : 0.086919

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 02:35	BKG	0.6400		
2-MAR-2006 03:59	BKG	0.5000		
3-MAR-2006 02:25	BKG	0.5500		
4-MAR-2006 02:29	BKG	0.4900		
4-MAR-2006 22:06	BKG	0.4200	In	
5-MAR-2006 22:29	BKG	0.4900		
7-MAR-2006 03:27	BKG	0.5100		
8-MAR-2006 03:03	BKG	0.7800		
9-MAR-2006 03:18	BKG	0.6100		
10-MAR-2006 01:32	BKG	0.7400		
11-MAR-2006 03:14	BKG	0.7400		
11-MAR-2006 19:24	BKG	0.7200		
12-MAR-2006 19:59	BKG	0.6500		
14-MAR-2006 03:26	BKG	0.7200		
15-MAR-2006 01:38	BKG	0.5400		
16-MAR-2006 03:10	BKG	0.4200	In	
17-MAR-2006 01:12	BKG	0.4200	In	
18-MAR-2006 04:20	BKG	0.4400	In	
18-MAR-2006 20:15	BKG	0.4700		
19-MAR-2006 19:38	BKG	0.5100		
21-MAR-2006 02:49	BKG	0.5000		
22-MAR-2006 01:41	BKG	0.4500		
23-MAR-2006 02:31	BKG	0.5200		
24-MAR-2006 02:49	BKG	0.4500		
25-MAR-2006 02:19	BKG	0.5000		
25-MAR-2006 20:30	BKG	0.5100		
26-MAR-2006 21:20	BKG	0.6800		
28-MAR-2006 03:49	BKG	0.6700		
29-MAR-2006 03:05	BKG	0.5500		
30-MAR-2006 02:56	BKG	0.5500		
31-MAR-2006 02:09	BKG	0.7300		
1-APR-2006 02:33	BKG	0.6700		
1-APR-2006 20:33	BKG	0.6800		
2-APR-2006 20:06	BKG	0.6600		

4-APR-2006 02:32 BKG

0.5800 | | |

Quality Assurance Multi-Test Full Report (continued)

Page: 5

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
5-APR-2006 01:39	BKG	0.5300		
6-APR-2006 03:59	BKG	0.5000		
7-APR-2006 02:22	BKG	0.5900		
8-APR-2006 04:17	BKG	0.7400		
8-APR-2006 21:12	BKG	0.4800		
9-APR-2006 21:26	BKG	0.4800		
11-APR-2006 02:10	BKG	0.4700		
12-APR-2006 02:44	BKG	0.6800		

URANIUM ISOTOPIC SAMPLE AND QC DATA

SEVERN	CT	T T

Data Review/Verification Checklist RADIOCHEMISTRY. First Level Review

4/14/2006 11:17:16 AM

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6060317; RUSIO Ulso by ALP

SDG, Matrix:

31025; FILTER

1.0	000
11.0	COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A

Yeş No N/A

2.0 QC Batch

- 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?
- Yeş No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yeşr No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yeş No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yea No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

Yeş No N/A

- 4.0 Raw Data
- 4.1 Were results calculated in the correct units?
- 4.2 Were analysis volumes entered correctly?

 Yes No N/A
- 4.3 Were Yields entered correctly?

Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

5.2 Are all required forms filled out?

Yes No N/A

5.3 Was the correct methodology used?

Yes No N/A

5.4 Was transcription checked?

Yeş No N/A

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

5.6 Are worksheet entries complete and correct?

es No N/A

6.0 Comments on any No response:

First Level Review

Pan, analysum

Date 4-14-04

STL Richland

Page



Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number:	1.060217
3	

Review Item	Yes (√)	No (1)	N/A (√)
A. Sample Analysis		1	
1. Are the sample yields within acceptance criteria?		<u> </u>	
2. Is the sample Minimum Detectable Activity < the Contract		1	
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples	1		ļ
1. Is the Minimum Detectable Activity for the blank result ≤ the	1 _		
Contract Detection Limit?		1	
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample	1	}	
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			1
Limit?		1	
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance		1	
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			

Comments on any "No"	' response:	
		,
Second Level Review.	Therry a alam.	Date: 4-14-06

3/30/2006 6:07:50 PM Sample Preparation/Analysis Balance Id:1120373922 536403, Brown and Caldwell . Brown & 7Y Ulso PrpRC5016/5086, SepRC5067(5039) Caldwell Pipet #: SR Uranium-234,235,238 by Alpha Spec Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060317 **FILTER** pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: 4-13-04 SEQ Batch, Test: None Prep Tech: HansenM Work Order, Lot, Total Amt Total Initial Aliquot Adj Aliq Amt QC Tracer Count Detector Count On | Off CR Analyst, Sample Date Comments: /Unit Acidified/Unit Amt/Unit (Un-Acidified) Prep Date Time Min ld (24hr) Circle Init/Date 1 HX81N-1-AG 0.833sa 503.56sa 37.57g,in 0.0621q UITC15325 J6B270158-1-SAMP 03/20/06.pd 12/16/02.r 02/05/2006 06:00 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 2 HX81Q-1-AG 0.833sa 501.73sa 37.51g in 0.0623g UITC15326 J6B270158-2-SAMP 03/20/06.pd 12/16/02,1 02/05/2006 06:35 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 3 HX81R-1-AG 0.833sa 500.94sa 37.56a.in 0.0625q UITC15327 J6B270158-3-SAMP 03/20/06.pd 12/16/02.r 02/05/2006 07:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 4 HX81T-1-AG 0.833sa 508.67sa 37.54q.in 0.0615a UITC15328 J6B270158-4-SAMP 03/20/06,pd 12/16/02,r 02/05/2006 07:45 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 5 HX81V-1-AG 0.833sa 501.14sa 37.54q.in 0.0624qUITC15329 J6B270158-5-SAMP 03/20/06,pd 12/16/02,r 02/05/2006 08:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 6 HX81W-1-AG 0.833sa 500.55sa 0.0625g 37.57q.in UITC15330 J6B270158-6-SAMP 03/20/06,pd 12/16/02,r 02/05/2006 08:40 AmtRec: FOLDER #Containers: 1 Scr; Alpha: Beta: 7 HX81X-1-AG 0.833sa 500.96sa 37.51g,in 0.0624g UITC15331 J6B270158-7-SAMP 03/20/06.pd 12/16/02.r 02/05/2006 06:10 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.20

∡ 3/30/2006 ∡					Sample Prep	aration/Ana	lysis		Balance	ld:1120373922	
	rown and	Caldwell	, 8	Brown & 7Y Ulso	PrpRC5016/5086, \$	SepRC5067(503				t #:	
ਲ Report Dι	ie: 03/31	/2006			nium-234,235,238 by NDARD TEST SET	/ Alpha Spec			Sep1 DT/Tm Te		
≝ Batch: 60		FILTER		Ci/sampl		Victor E. L. COA		·			
SEQ Batch,		e	P.	Obsampi	rin, G	luote: EJ , 631	74		Sep2 DT/Tm Te	ch:	
<u> </u>									Prep Te	ch: HansenM	
Work Order Sample D		Total Amt /Unit	Tota Acidified		t Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
8 HX811-1-A	-	0.833sa	501.81sa	a 37.57g,in	0.0624g	UITC15332					
1768510128-8		1 35 12 24 215	*			03/20/06,pd 12/16/02,r					
02/05/2006)6:15			AmtPon FOLDED	#O 4 3-	12/10/02/					
9 HX812-1-A		0.833sa	507,36sa	AmtRec: FOLDER 37.54q.in	#Containers: 1	LUTOLEGA		Scr:	Alpha:		Beta:
J6B270158-9		0.00001	307.3050	37.34g,in	0.0616g	UITC15333 03/30/06,pd					
} 1			±		***************************************	12/16/02 լ					****************
02/05/2006 0	06:05			AmtRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
10HX813-1-A		0.833sa	500.90sa	a 37.60g,in	0.0625g	UITC15334	<u>.</u>	·			
J6B270158-1		1 2 1 (1) 0 2 0 12				03/30/06,pd 12/16/02,r					
02/05/2006 0			************			121 191921			BB		
		0.833sa	500.44	AmtRec: FOLDER	#Containers: 1		 	Scr:	Alpha:		Beta:
11HX814-1-A	u (1-SAMP	J.033\$a	502.44sa	37.50g,in	0.0622g	UITC15335 03/30/06.pd					
I			••••		*	12/16/02,7	····				
02/05/2006 0	7:20	7 86 M M		AmtRec: FOLDER	#Containers: 1			Sor:	Alpha:		Beta:
12HX815-1-AC	G ().833sa	501.00sa	37.51g,in	0.0624g	UITC15336	-		- aprilar		Dela.
J6B270158-1		t 51 1 6 () a mra			-	03/30/06,pd					
02/05/2006 0	 		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			12/16/02,r				***************************************	
13HX816-1-AC		000	.	AmtRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
J6B270158-1	-).833sa	505.04sa	. 37.55 g,in	0.0619g	UITC15337 03/30/06.pd					
						12/16/02,r	**************			<u> </u>	
02/05/2006 0	8:20			AmtRec: FOLDER	#Containers; 1			Ser:	∆loho:		Date
14HX817-1-AC	÷ 0).833sa	501.67sa	37.53g,in	0.0623g	UITC15338		OUI.	Alpha:		Beta:
J6B270158-1	4-SAMP			w [,]	J	03/30/06,pd					
00/05/0000			··			12/16/02 _. r	***				
02/05/2006 0	8:45			AmtRec: FOLDER	#Containers: 1		···	Scr:	Alpha:		Beta:
STL Richia	nd Ko	c In - Initial A	me di E:	Ame di Date de							
Richland W		nd - Prep Dt	un, 11 - Fina l 1 - Reference	Amt, di - Diluted Amt, s e Dt, ec-Enrichment Cel	s1 - Sep1, s2 - Sep2	Page 2	ISV - In	sufficient Volume	e for Analysis		VO Cnt: 14
			, , , , , , , , , , , , , , , , , , , ,	c an or randomient ce	i. Groocktalled Added					Prep	SamplePrep v4.8

3/30/2006 6:07 536403, Brown Caldwell Report Due: 03	and Caldwell	, Bı	rown &	7Y Ulso P SR Uraniu	Sample Prep rpRC5016/5086, 8 m-234,235,238 by DARD TEST SET	SepRC5067(503	_			e ld:112037392 et #: ech:	2
Batch: 606031' SEQ Batch, Test:		рС	i/samp		PM, Q	uote: EJ , 631	74		Sep2 DT/Tm To		
West Ostas Lat	II 	11							Prep T	ech: HansenM	
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/I	Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	, Comments
15HX818-1-AG J6B270158-15-SAM		501.09sa		37.64g,in	0.0626g	UITC15339 03/30/06,pd 12/16/02,r			. "		
02/05/2006 06:45			AmtRed	FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
16H0EHT-1-AA-B J6C010000-317-BL	K			1.00sa,in	1.00sa	UITC15340 03/30/06,pd 12/16/02,r					
02/05/2006 06:00			AmtRed	: #C	ontainers: 1			Scr:	Alpha:		Beta:
17H0EHT-1-AC-C J6C010000-317-LC	_			1.00sa,in	1.00sa	UISF0442 03/16/06,pd 03/22/05,r	,		· · · · · · · · · · · · · · · · · · ·		
02/05/2006 06:00			AmtRed	: #C	ontainers: 1		**************************************	Sgr:	Alpha:		Beta:
Comments:											
11 Clients for 536403, Bro	Batch: wn and Caldwell	1		Brow	m & Caldwell			···-	 		
					n & Caldwell		EJ , 63174				
	onstituent Lise DL: DL:1	pCi/sam	LCL:20	UCL: 115 UCL:	RPD:20	Ū−23 4 Ū−238	RDL:1 RDL:1	pCi/sa pCi/sa		UCL:	RPD: RPD:
OEHTIAA-BLK:											
	DL: DL:1		LCL:20 LCL:	UCL:115 UCL:	RPD:20 RPD:	U-234 U-238	RDL:1 RDL:1	pCi/sa pCi/sa		UCL: UCL:	RPD: RPD:
OEHT1AC-LCS: U-232 R	DL:	pCi/sam	LCL:20	UCL:115	RPD:20	Uranium	RDL:	pCi/sa	um LCL:70	UCL:130	RPD:20
X81n1ag-samp c Uncert Lev OEHT1aa-BLK:	alc Info: el (#s).: 2	Decay to	SaDt: Y	Blk Sub	t.: N Sci.N	ot.: Y ODI	ks: B				
STL Richland	Key: In - Initial Am				Sep1, s2 - Sep2	Page 3	ISV - Ins	sufficient Volume	e for Analysis		WO Cnt: 17

4/14/2006 11:11:44 AM

ICOC Fraction Transfer/Status Report ByDate: 4/14/2005, 4/19/2006, Batch: '6060317', User: *ALL Order By DateTimeAccepting

Batch Wor	k Ord CurStat	us A	ccepting		Comments
6060317					
4 <i>C</i>	CalcC	HansenM	3/20/2006 4:07	:14 PM	
S <i>C</i>		wagarr	IsBatched	3/1/2006 4:16:24 PM	ICOC_RADCALC v4.8.18
SC .		HansenM	InPrep2	3/20/2006 4:07:14 PM	RICH-RC-5016 REVISION 5
ic .		HansenM	Prep2C	3/31/2006 9:19:20 AM	RICH-RC-5016 REVISION 5
iC		ManisD	Sep2C	4/12/2006 4:24:25 PM	RICH-RC-5067 REV 6
iC		FABREM	InSep2	4/12/2006 5:51:27 PM	RICH-RC-5039 REV 4
SC .		FABREM	Sep2C	4/13/2006 11:57:38 AM	RICH-RC-5039 REV 4
SC .		BlackCL	InCnt1	4/13/2006 12:12:37 PM	RICH-RD-0008 REVISION 4
C C		DAWKINSO	CalcC	4/13/2006 9:50:03 PM	RICH-RD-0008 REVISION 4
С		HansenM	3/31/2006 9:19	:20	
C		ManisD	4/12/2006 4:24	:25 PM	
С		FABREM	4/12/2006 5:51	:27 PM	
AC		FABREM	4/13/2006 11:5	7:38	
4 <i>C</i>		BlackCL	4/13/2006 12:1:	2:37	
4 <i>C</i>		DAWKINSO	4/13/2006 9:50	:03 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa. STL RICHLAND Page 1

Grp Rec Cnt:7 ICOCFractions v4.8.18

4/14/2006 11	1:11:43 AM	1	Rpt DB Transfe	r log (Batcl	n Res	ults)		VERN RENT	STL
SDG or Batch	Rpt Db		LotSample Client Id	Matrix		ved Date	Sample Date			-1
<u> </u>	<u>Method</u> 9HX811		Oc Analysis Date Result J6B2701588 P 0517	Cnt Uncert AIR	Tot uncer 2/27/2	<u>т_маа</u> 2006 8:00:00		<i>cted Yiel</i> 00 AM	a ve	olumes
ALPHA	BAS7	0	4/6/2006 8:46:58 PM 9.9486E-03			5.274E+00		1.0	1.0E+0	2.082E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM 1.5137E+00	- ·		5.298E+00		1.0	1.0E+0	3.405E-2
RA-226	BXTE	0	4/10/2006 2:46:00 PM 2.2347E-01	9.499E-02	9.757E-02	2.773E-01	PCI/SA	1.058	8.33E-1	2. 493 E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 1.5971E+00			1.772E+00		0.938	1.0E+0	2.493E-1
U-234	7YSR	0	4/13/2006 7:01:11 PM -4.2672E-02			6.027E-01		0.922	1.0E+0	3.237E-2
U-235	7YSR	0	4/13/2006 7:01:11 PM -2.1336E-02			5.108E-01		0.922	1.0E+0	3.237E-2
U-238	7YSR	0	4/13/2006 7:01:11 PM -4.2672E-02	3.017E-02	3.053E-02	6.027E-01	PCI/SA	0.922	1.0E+0	3.237E-2
31025	9HX812	-	J6B2701589 000357	AIR	2/27/2	2006 8:00:00	2/5/2006 6:05:0	OO AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1.0284E+01	2.198E+00	2.444E+00	5.179E+00	PCI/SA	1.0	1.0E+0	2.07E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM 1.7618E+01			5.209E+00		1.0	1.0E+0	3.295E-2
RA-226	BXTE	0	4/10/2006 3:21:00 PM -2.3959E-01	1.359E-01	1.382E-01	6.036E-01	PCI/SA	0.937	8.33E-1	2.48E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 4.4971E+00	8.231E-01	8.706E-01	2.832E+00	PCI/SA	0.572	1.0E+0	2.48E-1
U-234	7YSR	0	4/13/2006 7:01:25 PM 3.7594E-01	1.989E-01	2.029E-01	4.74E-01	PCI/SA	1.108	1.0E+0	3.163E-2
U-235	7YSR	0	4/13/2006 7:01:25 PM 0.0E+00	0.0E+00	1.212E-01	2.681E-01	PCI/SA	1.108	1.0E+0	3.163E-2
U-238	7YSR	0	4/13/2006 7:01:25 PM 7.9127E-02	1,009E-01	1.013E-01	4.74E-01	PCI/SA	1.108	1.0E+0	3.163E-2
31025	9HX813	810	J6B27015810 000358	AIR	2/27/2	2006 8:00:00	2/5/2006 6:40:0	MA OC		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 4.1731E+00	1.552E+00	1.612E+00	4.862E+00	PCI/SA	1.0	1.0E+0	2.08E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.6272E+01	1.704E+00	2.031E+00	5.341E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.6862E-01			3.078E-01		0.985	8.33E-1	2.505E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM 1.8241E+00	4.46E-01		1.638E+00		0.882	1.0E+0	2.505E-1
U-234	7YSR	0	4/13/2006 7:01:39 PM -1.8302E-02	1.83E-02		4.378E-01		0.974	1.0E+0	3.253E-2
U-235	7YSR	o o	4/13/2006 7:01:39 PM - 3.6604E-02			5.166E-01		0.974	1.0E+0	3.253E-2
U-238	7YSR	0	4/13/2006 7:01:39 PM -1.8302E-02	1.83E-02		4.378E-01		0.974	1.0E+0	3.253E-2
31025	9HX814	110	J6B27015811 000359	AIR	2/27/2	00:00 8:00:00	2/5/2006 7:20:0	DO AM		
ALPHA	BAS7	0	4/7/2006 8;42;10 AM 6.8426E+00	1.932E+00	2.058E+00	5.45E+00	PCI/SA	1.0	1.0E+0	2.079E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 1.8892E+01	1.608E+00	2.503E+00	4.713E+00	PCi/SA	1.0	1.0E+0	3.318E-2
RA-226	BXTE	0	4/10/2006 3:20:00 PM 3.0838E-01			4.564E-01		1,111	8.33E-1	2.498E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 2.2626E+00	4.868E-01	5.105E-01	1.737E+00	PCI/SA	0.811	1.0E+0	2.498E-1
U-234	7YSR	0	4/13/2006 7:01:45 PM 1,9364E-01	1.369E-01	1.385E-01	2.624E-01	PCI/SA	1.011	1.0E+0	3.217E-2
U-235	7YSR	0	4/13/2006 7:01:45 PM -1.9371E-02	1.937E-02	1.948E-02	4.638E-01	PCI/SA	1.011	1.0E⋅+0	5.217E-2
U-238	7YSR	0	4/13/2006 7:01:45 PM 9.6821E-02	9.682E-02	9.739E-02	2.624E-01	PCI/SA	1.011	1.0E+0	3.217E-2
31025	9HX815	_	J6B27015812 000360	AIR	2/27/2	00:00:8 8:00	2/5/2006 7:50:0	MA OC		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 1,6852E+01	2.628E+00	3.144E+00	5.103E+00	PCI/SA	1.0	1.0E+0	2.093E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM 2.5147E+01	1.852E+00		5.06E+00	PCI/SA	1.0	1.0E+0	3.357E-2
RA-226	BXTE	0	4/10/2006 3:21:00 PM 5.6304E-01			5.117E-01	PCI/SA	1.039	8.33E-1	2.515E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 1.8457E+00	4.531E-01	4.739E-01	1.73E+00	PCI/SA	0.824	1.0E+0	2.515E-1
U-234	7YSR	0	4/13/2006 7:02:17 PM 1.2301E+00	3.478E-01	3.722E-01	4.81E-01	PCI/SA	1.102	1.0E+0	3.237E-2
U-235	7YSR	0	4/13/2006 7:02:17 PM 6.5513E-02				PCI/SA	1.102	1.0E+0	3.237E-2
U-238	7YSR	0	4/13/2006 7:02:17 PM 8.5217E-01	2.894E-01	3.036E-01	4.407E-01	PCI/SA	1.102	1.0E+0	3.237E-2
31025	9HX816		J6B27015813 000361	AIR	2/27/2	006 8:00:00	2/5/2006 8:20:0	DO AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM 9.3614E+00	2.111E+00	2.319E+00	4.967E+00	PCI/SA	1.0	1.0E+0	2.09E-2
ВЕТА	BD\$8	0		1.871E+00				1.0	1.0E+0	3.3E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM 2.0856E+00	2.48E-01				1.141	8.33E-1	2.483E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM 2.1678E+01					1.008	1.0E+0	2.483E-1
U-234	7YSR	0	4/13/2006 7:02:23 PM 8.281E-01			6.158E-01		0.913	1.0E+0	5.193E-2
U-235	7YSR	0	4/13/2006 7:02:23 PM 0.0E+00			2.953E-01		0.913	1.0E+0	3.193E-2
U-238	7YSR	0	4/13/2006 7:02:23 PM 7.453E-01			4.98E-01		0.913	1.0E+0	3.193E-2
31025	9HX817		J6B27015814 000362	AIR		006 8:00:00		00 AM		
ALPHA	BAS7	0	4/7/2006 11:31:06 AM 1.0892E+01					1.0	1.0E+0	2.095E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM 2.4118E+01					1.0	1.0E+0	3.384E-2
RA-226	BXTE	0	4/10/2006 3:19:03 PM 1.1391E-0 1	1.07E-01				0.96	8.33E-1	2.493E-1
107 220	- M. I.	3								,

STL Richland, Wa Calc Review v4.8.18

^{6060317, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 50 | 0 | 0 | 0.

**Diff RptDb | Qtims => .

ALPHA BAS7 0 4/6/2006 6:03:23 PM 4.8606E+00 1.709E+00 5.25E+00 PC//SA 1.0 1.0E+00 2.087E-2 BETA BDS8 0 4/5/2006 9:14:39 AM 1.3284E+01 1.666E+00 1.895E+00 5.53E+00 PC//SA 1.0 1.0E+0 3.319E-2 RA-226 BXTE 0 4/10/2006 6:59:20 PM 4.0898E-02 1.384E-01 1.709E+00 PC//SA 1.01 1.0E+0 2.508E-1 U-234 7YSR 0 4/13/2006 6:59:20 PM 4.8998E-02 1.384E-01 1.383E-01 1.005E+00 PC//SA 0.783 1.0E+0 2.508E-1 U-235 7YSR 0 4/13/2006 6:59:20 PM 4.8998E-02 1.384E-01 1.383E-01 1.005E+00 PC//SA 0.783 1.0E+0 2.508E-1 U-238 7YSR 0 4/13/2006 6:59:20 PM 4.97911E-02 4.896E-02 5.012E-02 8.405E-01 PC//SA 0.783 1.0E+0 2.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM 4.97911E-02 4.896E-02 5.012E-02 8.405E-01 PC//SA 0.783 1.0E+0 2.246E-2 ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.245E+00 5.465E+01 PC//SA 0.783 1.0E+0 2.052E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.910E+01 1.8E+00 2.257E+00 5.406E+00 PC//SA 1.0 1.0E+0 2.052E-2 RA-226 BXTE 0 4/10/2006 6:42:05 AM 4.913E-02 4.822E-01 4.822E-01 2.32E+00 PC//SA 1.0 1.0E+0 2.052E-2 RA-228 BXTF 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.305E-01 8.009E-01 PC//SA 0.813 1.0E+0 2.463E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.305E-01 8.009E-01 PC//SA 0.813 1.0E+0 3.465E-2 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.895E-01 2.787E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-236 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.895E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.895E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-236 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.785E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.785E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.895E-01 2.785E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-236 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.365E-01 1.965E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.365E-01 1.965E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.355E-01 1.365E-01 1.95E-0	SDG or Batch	Rpt Db Id			Client Id	Matri		ved Date	Sample L			
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1928 7958 0			_									
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ALPHA BAST 0 47/2009 11:31:05 AM -BASS45-01 7/78E-01 4.877E-00 POISA 10 10E-0 2055E2 RA-228 BXTE 0 47/2009 11:31:05 AM -BASS45-01 12:05E-00 1:225E-00 5.08E-00 POISA 10 10E-0 347E-2 RA-228 BXTE 0 47/2009 68-4344 M -12875E-01 3.75E-01 3.75E-01 10E-00 10E-A 0.0327 10E-0 2.50SE-1 RA-228 BXTE 0 47/2009 68-4344 AM -1.787E-01 3.75E-01 3.75E-01 10E-00 POISA 0.337 10E-0 2.50SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.05E-00 3.07E-01 3.05E-01 POISA 0.337 10E-0 2.50SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.05E-00 1.00SE-01 3.01SE-01 POISA 0.0327 10E-0 2.50SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.05E-00 1.00SE-01 3.01SE-01 POISA 0.0328 10E-0 3.20SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.05E-00 1.00SE-01 3.01SE-01 POISA 0.0328 10E-0 3.20SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.05E-00 1.00SE-01 3.01SE-01 POISA 0.0328 10E-0 3.20SE-1 U-235 7YSR 0 47/30209 5702-45 PM -0.0328 0.00E-00 1.00SE-01 3.01SE-01 POISA 0.0328 10E-0 3.20SE-0 POISA 0.00E-00 2.00E-00 AM -0.00E-00 2.00E-00 3.00E-00 2.00E-00 5.00E-00 POISA 0.00E-00 2.00E-00 AM -0.00E-00 2.00E-00 3.00E-00 POISA 0.00E-00 2.00E-00 3.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 POISA 0.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-00 2.00E-	ŀ		=	_								7.2022 2
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BETA BDS8 0 4/5/2006 9:14:39 AM 1.3188E-01 1.84E-00 1.89E-00 5.40BE-00 PCISA 10 10.00 1278E-0 RA-226 BXTE 0 41/10/2006 2:50:00 PM 2.6364E-01 1.546E-01 1.559E-01 5.22E-01 PCISA 0.935 338E-1 251E-1 PA-228 BXTF 0 41/10/2006 6:55:37 PM 1.915E-01 1.009E-01 1.013E-01 4.74*E-01 PCISA 1.048 1.0E-0 315E-0 U-236 7YSR 0 41/10/2006 6:55:37 PM 1.915E-02 1.009E-01 1.013E-01 4.74*E-01 PCISA 1.048 1.0E-0 315E-0 U-236 7YSR 0 41/10/2006 6:58:37 PM 1.915E-02 1.009E-01 1.009E-01 1.03E-01 4.74*E-01 PCISA 1.048 1.0E-0 315E-02 U-238 7YSR 0 41/10/2006 6:58:37 PM 1.915E-02 1.009E-01 1.009E-01 1.212E-01 2.882E-01 PCISA 1.048 1.0E-0 315E-02 U-238 7YSR 0 41/10/2006 6:58:37 PM 1.915E-02 1.009E-01 1.212E-01 2.882E-01 PCISA 1.048 1.0E-0 315E-02 U-238 PMX81010 4/50206 6:03:23 PM 2.8199E-00 1.609E-00 5.93E-00 PCISA 1.0 1.0E-0 315E-02 PMX81010 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-02 PM 1.0E-0 315E-0 PM 1.0E-0				0002/0/00							1.0F0	2.091E-2
RA-226 BXTF 0												
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ALPHA BAS7 0 4/5/2006 8:103:23 PM 2:9199E-00 1.632E+00 5.973E+00 PC/ISA 1.0 1.0E+0 2.082E-2 BETA BDS8 0 4/5/2006 8:14:39 AM 1.1516E-01 1.52E+00 1.81E+00 5.034E+00 PC/ISA 1.0 1.0E+0 3.315E-2 1.32E-01 1.				_								
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19-235 7YSR 0 4/13/2006 6:59:14 PM 1.0E+00 1.59E+01 1.59	1		-									
1.0238 TYSR 0	-		-			0.0E+00	1.293E-01	2.86E-01	PCI/SA	0.946	1.0E+0	3.228E-2
AlPHA BAS7 0	U-238	7YSR	0	4/13/2006 6:59:14 PM	1.6882E-01	1.522E-01	1.533E-01	5.965E-01	PCI/SA	0.946	1.0E+0	3.228E-2
BETA BDS8 0	31025	9HX81R1	0	J6B2701583 P	0512	AIR	2/27/2	006 8:00:00	2/5/2006	7:15:00 AM		
RA-226 BXTE 0 4/10/2006 5:51:00 PM 1.0827E-01 8.15E-02 8.23E-02 2.838E-01 PC/SA 1.151 8.33E-1 2.508E-1 U-234 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.385E-01 1.005E+00 PC/SA 0.783 1.0E+0 3.246E-2 U-235 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.295E-01 1.05E+00 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.295E-01 7.724E-01 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM 4.97911E-02 4.896E-02 5.012E-02 8.00:00 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM 9.7911E-02 4.896E-02 5.012E-02 8.00:00 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM 9.7911E-02 4.896E-02 5.012E-02 8.00:00 PC/SA 0.783 1.0E+0 3.246E-2 U-238 PM 9.898E-04 4/5/2006 9:14:52 AM 1.9108E-01 1.6E+00 2.227E+00 5.406E+00 PC/SA 1.0 1.0E+0 3.204E-2 BXTE 0 4/10/2006 6:42:05 AM 4.913E-02 4.822E-01 2.305E-01 8.009E-01 PC/SA 0.843 1.0E+0 3.246E-2 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-01 2.462E-1 4.822E-01 2.32E+00 PC/SA 0.819 1.0E+0 3.148E-2 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-01 2.689E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-01 2.689E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-01 2.689E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-01 2.689E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 PMX1V10 J6B2701585 P 0.514 AIR 0.689E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 PXSR 0 4/13/2006 6:59:32 PM 1.6437E+01 1.366E-01 2.738E-01 8.69E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-234 7YSR 0 4/13/2006 6:59:32 PM 1.468E-01 1.366E-01 2.738E-01 8.69E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 PXSR 0 4/13/2006 6:59:32 PM 1.4088E-01 1.366E-01 2.738E-01 8.69E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 PXSR 0 4/13/2006 6:59:35 PM 1.468E-01 1.366E-01 1.366E-01 1.366E-01 PC/SA 0.81 0.0E+0 3.148E-2 U-238 PXSR 0 4/13/2006 6:59:45 PM 1.4088E-01 1.366E-01 1.366E-01 1.366E-01 1.96E-00 PC/SA 0.971 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.4088E-01 1.366E-01 1.36	ALPHA	BAS7	0	4/6/2006 6:03:23 PM	4.8606E+00	1.709E+00	1.78E+00	5.252E+00	PCI/SA	1.0	1.0E+0	2.087E-2
RA-228 BXTF 0 4/12/2006 6:41:36 AM -4.3617E-01 4.783E-01 4.783E-01 2.347E+00 PC/SA 1.014 1.0E+0 2.508E-1 U-234 7YSR 0 4/13/2006 6:59:20 PM -4.8988E-02 1.296E-01 1.385E-01 1.005E+00 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM -9.7911E-02 4.896E-02 5.012E-0-02 8.405E-01 PC/SA 0.783 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM -9.7911E-02 4.896E-02 5.012E-0-02 8.405E-01 PC/SA 0.783 1.0E+0 3.246E-2 31025 9HX81T10 J6B2701584 P 0513 AIR 2/27/206 8:00:00 2/5/2006 7:45:00 AM 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.454E+00 5.405E+01 PC/SA 1.0 1.0E+0 3.246E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.9108E+01 1.6E+00 2.227E+00 5.406E+00 PC/SA 1.0 1.0E+0 3.246E-2 BXTE 0 4/10/2006 6:59:32 PM 4.715E-02 4.82E-01 4.82E-01 2.305E-01 8.009E-01 PC//SA 0.843 1.0E+0 3.246E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.405E-01 2.44E-01 8.1E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.736E+00 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.736E+00 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.736E+00 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.736E+00 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.356E-01 1.736E+00 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 1.536E-01 1.56E+00 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.509E-01 1.556E+00 PC//SA 0.98 1.0B 0.99 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.509E-01 1.556E-01 1.36E-01 1.95E-01 PC//SA 0.8 1.0B 0.99 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.509E-01 1.156E-01 1.36E-01 1.96E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13	BETA	BD\$8	0	4/5/2006 9:14:39 AM	1.3284E+01	1.666E+00	1.895E+00	5.53E+00	PCI/SA	1.0	1.0E+0	3.319E-2
U-234 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.005E+00 PC/SA 0.783 1.0E+0 3.246E-2 U-235 7YSR 0 4/13/2006 6:59:20 PM 4.893E-02 1.295E-01 1.296E-01 7.724E-01 PC/SA 0.783 1.0E+0 3.246E-2 U-236 7YSR 0 4/13/2006 6:59:20 PM 4.97911E-02 4.896E-02 5.012E-02 8.405E-01 PC/SA 0.783 1.0E+0 3.246E-2 31025 9HX81T10 JGB2701586 P 0.513 AIR 22/27/2006 8:00:00 2/5/2006 7:45:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.245E+00 5.405E-01 PC/SA 1.0 1.0E+0 2.052E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.9108E-01 1.8E+00 2.227E+00 5.405E-01 PC/SA 1.0 1.0E+0 2.052E-2 BA-226 BXTE 0 4/10/2006 2:50:01 PM 2.633E-01 2.287E-01 2.305E-01 8.009E-01 PC/SA 0.813 1.0E+0 2.463E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 3.773E-01 2.405E-01 2.32E+00 PC/SA 0.819 1.0E+0 3.148E-2 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.89E-01 2.738E-01 8.679E-01 PC/SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.89E-01 2.738E-01 8.679E-01 PC/SA 0.819 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E-00 5.472E-00 PC/SA 0.819 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E-00 5.071E-00 PC/SA 0.819 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E-00 5.472E+00 PC/SA 0.819 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E-00 5.472E+00 PC/SA 0.819 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.2728E+00 4.537E-01 1.266E-01 PC/SA 0.81 1.0 1.0E+0 2.086E-2 BETA BDS8 0 4/10/2006 6:59:45 PM 1.1509E-01 1.354E-01 1.266E-01 PC/SA 0.81 1.0E+0 2.056E-2 BETA BDS8 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PC/SA 0.8 1.0E+0 2.215E-1 1.22E-01 1.22E-01 1.22E-01 1.22E-01 PC/SA 0.8 1.0E+0 2.215E-1 1.22E-01 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/SA 0.8 1.0E+0 2.215E-1 PC/S	RA-226	BXTE	0	4/10/2006 2:51:00 PM	1.0827E-01	8.15E-02	8.232E-02	2.838E-01	PCI/SA	1.151	8.33E-1	2.508E-1
U-235 7YSR 0 4/13/2006 6:59:20 PM 4.8923E-02 1.296E-01 7.724E-01 PCl/SA 0.763 1.0E+0 3.246E-2 U-238 7YSR 0 4/13/2006 6:59:20 PM -9.7911E-02 4.896E-02 5.012E-02 8.405E-01 PCl/SA 0.763 1.0E+0 3.246E-2 31025 9HX81T10 J6B2701584 P 0513 AIR 2/277∠006 8:00:00 2/5/2006 7:45:00 AM	RA-228	BXTF	0	4/12/2006 6:41:36 AM	-4.3617E-01	4.783E-01	4.783E-01	2.347E+00	PCI/SA	1.014	1.0E+0	2.508E-1
U-238 7YSR 0 4/13/2006 6:59:20 PM -9.7911E-02 4:896E-02 5.012E-02 8:405E-01 PC//SA 0.783 1.0E+0 3.246E-2 31025 9HX81T10 J6B2701584 P 0513 AIR 2/27/2∪06 8:00:00 2/5/2006 7:45:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.454E+00 5.858E+00 PC//SA 1.0 1.0E+0 3.246E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.9108E+01 1.8E+00 2.227E+00 5.406E+00 PC//SA 1.0 1.0E+0 3.204E-2 BA-226 BXTE 0 4/10/2006 2:50:01 PM 2.633E-01 2.287E-01 2.305E-01 8.009E-01 PC//SA 0.98 8.33E-1 2.462E-1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 4.913E-02 4.822E-01 4.822E-01 2.32E+00 PC//SA 0.843 1.0E+0 2.463E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.405E-01 2.44E-01 8.1E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 8.679E-01 PC//SA 0.819 1.0E+0 3.148E-2 31025 9HX81V10 J6B2701585 P 0514 AIR 2/27/2∪06 8:00:00 2/5/2006 8:15:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.0898E+00 2.05E+00 2.261E+00 4.93E+00 PC//SA 1.0 1.0E+0 3.148E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.354E-01 1.363E-01 PC//SA 1.0 1.0E+0 3.311E-2 RA-228 BXTF 0 4/10/2006 2:50:03 PM 1.4088E-01 1.354E-01 1.363E-01 PC//SA 1.0 1.0E+0 3.311E-2 BA-226 BXTE 0 4/10/2006 6:59:45 PM 1.2728E+00 4.537E-01 1.365E-01 PC//SA 0.8 1.0 1.0E+0 3.311E-2 BA-228 BXTF 0 4/13/2006 6:59:45 PM 1.2728E+00 4.537E-01 1.24E-01 7.906E-01 PC//SA 0.8 1.0E+0 3.31E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 7.906E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-236 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0	U-234	7YSR	0	4/13/2006 6:59:20 PM	-4.8988E-02	1.384E-01	1.385E-01	1.005E+00	PCt/SA	0.783	1.0E+0	3.246E-2
ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.45E+00 5.858E+00 PCI/SA 1.0 1.0E+0 3.204E+2 EBTA BDS8 0 4/5/2006 9:14:52 AM 1.9108E+01 1.8E+00 2.22TE+00 5.406E+00 PCI/SA 1.0 1.0E+0 3.204E+2 BATE 0 4/10/2006 2:50:01 PM 2.633E-01 2.287E-01 2.305E-01 8.009E-01 PCI/SA 0.98 8.33E+1 2.462E+1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 4.913E-02 4.822E-01 4.822E-01 2.32E+00 PCI/SA 0.843 1.0E+0 2.463E+1 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PCI/SA 0.819 1.0E+0 3.148E+2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PCI/SA 0.819 1.0E+0 3.148E+2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 8.079E-01 PCI/SA 0.819 1.0E+0 3.148E+2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 8.079E-01 PCI/SA 0.819 1.0E+0 3.148E+2 U-238 RA-226 BXTE 0 4/16/2006 8:46:58 PM 9.0898E+00 2.055E+00 2.261E+00 4.93E+00 PCI/SA 0.819 1.0E+0 3.148E+2 U-238 BXTE 0 4/16/2006 8:14:52 AM 1.6437E+01 1.736E+00 2.261E+00 4.93E+00 PCI/SA 1.0 1.0E+0 3.311E+2 RA-228 BXTE 0 4/16/2006 6:42:05 AM 1.2728E+00 4.637E+01 1.363E+01 1.363E+01 1.95E+00 PCI/SA 0.971 1.0E+0 3.311E+2 U-234 7YSR 0 4/13/2006 6:59:45 PM 1.2728E+00 4.637E+01 1.354E+01 1.95E+00 PCI/SA 0.8 1.0E+0 3.24E+2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 1.151E-01 1.158E+01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E+2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E+2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E+2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E+2 U-238	U-235	7YSR	0	4/13/2006 6:59:20 PM	4.8923E-02	1.295E-01	1.296E-01	7.72 4E-0 1	PCI/SA	0.783	1.0E+0	3.246E-2
ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.6327E+00 2.24E+00 2.454E+00 5.858E+00 PC//SA 1.0 1.0E+0 2.052E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.9108E+01 1.8E+00 2.227E+00 5.408E+00 PC//SA 1.0 1.0E+0 3.204E-2 BXTE 0 4/10/2006 2:50:01 PM 2.633E-01 2.287E-01 2.305E-01 8.009E-01 PC//SA 0.98 8.33E-1 2.462E-1 BA-228 BXTF 0 4/12/2006 6:42:05 AM 4.913E-02 4.822E-01 4.822E-01 2.32E+00 PC//SA 0.843 1.0E+0 2.463E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 3.773E-01 2.405E-01 2.44E-01 8.1E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 8.679E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 PC//SA 0.819 1.0E+0 3.148E-2 U-238 PM 4.7162E-01 D-236 PM 4.7162E-01	U-238	7YSR	0	4/13/2006 6:59:20 PM	-9.7911E-02	4.896E-02	5.012E-02	8.405E-01	PCI/SA	0.783	1.0E+0	3.246E-2
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U-235 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PCI/SA 0.819 1.0E+0 3.148E-2 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.7162E-01 2.689E-01 2.738E-01 8.679E-01 PCI/SA 0.819 1.0E+0 3.148E-2 31025 9HX81V10 J6B2701585 P 0514 AIR 2/27/2006 8:00:00 2/5/2006 8:15:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.0898E+00 2.055E+00 2.261E+00 4.93E+00 PCI/SA 1.0 1.0E+0 2.086E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E+00 5.472E+00 PCI/SA 1.0 1.0E+0 3.311E-2 RA-226 BXTE 0 4/10/2006 2:50:03 PM 1.4068E-01 1.354E-01 1.363E-01 4.886E-01 PCI/SA 1.081 8.33E-1 2.515E-1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PCI/SA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	1											
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31025 9HX81V10 J6B2701585 P 0514 AIR 2/27/2006 8:00:00 2/5/2006 8:15:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.0898E+00 2.055E+00 2.261E+00 4.93E+00 PCI/SA 1.0 1.0E+0 2.086E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E+00 5.472E+00 PCI/SA 1.0 1.0E+0 3.311E-2 BA-226 BXTE 0 4/10/2006 2:50:03 PM 1.4068E-01 1.354E-01 1.363E-01 4.886E-01 PCI/SA 1.081 8.33E-1 2.515E-1 BA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PCI/SA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 S1025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	1											
ALPHA BAS7 0 4/6/2006 8:46:58 PM 9.0898E+00 2.055E+00 2.261E+00 4.93E+00 PCI/SA 1.0 1.0E+0 2.086E-2 BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E+00 5.472E+00 PCI/SA 1.0 1.0E+0 3.311E-2 RA-226 BXTE 0 4/10/2006 2:50:03 PM 1.4068E-01 1.354E-01 1.363E-01 4.886E-01 PCI/SA 1.081 8.33E-1 2.515E-1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PCI/SA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	i										1.0E+0	3.148E-2
BETA BDS8 0 4/5/2006 9:14:52 AM 1.6437E+01 1.736E+00 2.071E+00 5.472E+00 PCI/SA 1.0 1.0E+0 3.311E-2 RA-226 BXTE 0 4/10/2006 2:50:03 PM 1.4068E-01 1.354E-01 1.363E-01 4.886E-01 PCI/SA 1.081 8.33E-1 2.515E-1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PCI/SA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	31025											
RA-226 BXTE 0 4/10/2006 2:50:03 PM 1.4068E-01 1.354E-01 1.363E-01 4.886E-01 PC/VSA 1.081 8.33E-1 2.515E-1 RA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PC/VSA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 1.24E-01 7.906E-01 PC/VSA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC/VSA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PC/VSA 0.8 1.0E+0 3.24E-2 U-238 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM												
RA-228 BXTF 0 4/12/2006 6:42:05 AM 1.2728E+00 4.537E-01 4.683E-01 1.95E+00 PCVSA 0.971 1.0E+0 2.515E-1 U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 7.906E-01 PCVSA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCVSA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCVSA 0.8 1.0E+0 3.24E-2 31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM												
U-234 7YSR 0 4/13/2006 6:59:45 PM 2.2995E-02 1.24E-01 7.906E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PCI/SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCI/SA 0.8 1.0E+0 3.24E-2 31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM												
U-235 7YSR 0 4/13/2006 6:59:45 PM 1.1509E-01 1.151E-01 1.158E-01 3.119E-01 PC//SA 0.8 1.0E+0 3.24E-2 U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PC//SA 0.8 1.0E+0 3.24E-2 31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	1											
U-238 7YSR 0 4/13/2006 6:59:45 PM 1.1503E-01 2.122E-01 2.126E-01 1.069E+00 PCVSA 0.8 1.0E+0 3.24E-2 31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM												
31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM	Y											
V (VIII)				_							1.0E+0	5.24E-2
ALPHA BAS7 0 4/6/2006 8:46:58 PM 6.5328E+00 1.979E+00 2.091E+00 5.942E+00 PCl/SA 1.0 1.CE+3 2.095E-2	31025											2005
	ALPHA	BAS7	O	4/6/2006 8:46:58 PM	6.5328E+00	1.979E+00	2.091E+00	5.942E+00	PCI/SA	1.0	1.CE+3	2.095E-2

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Page 2

^{6060317, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,

**Results Inserted | ReTestInserted | Updated | NotInserted => 50 | 0 | 0 | 0.

**Diff RptDb | Qtims => .

SDG or Batch	Rpt Db Id		LotSample	Client Id	Matrix		ved Date		le Date	14.	
Isotope	Method	RTst (Result	Cnt Uncert			Units	Expected Yield	1.0E+0	<i>lumes</i> 3.342E-2
BETA	BDS8	0	4/5/2006 9:14:52 AN	A 1.3832E+01	1.591##00		5.064E+00		1.0		J
RA-226	BXTE	0	4/10/2006 2:51:01 P	M 2.3557E+00	2.987E-01	3.921E-01	7.098E-01	PCI/SA	0.934	8.33E-1	2.51E-1
RA-228	BXTF	0	4/12/2006 6:42:05 A	M 1.8877E+01	1.088E+00	1.556E+00	2.545E+00	PCI/SA	0.823	1.0E+0	2.51E-1
U-234	7Y\$R	0	4/13/2006 7:00:00 P	M 0.0E+00	0.0E+00	1.46E-01	3.23E-01	PCI/SA	0.831	1.0E+0	3.252E-2
U-235	7YSR	0	4/13/2006 7:00:00 P	M 0.0E+00	0.0E+00	1.46E-01	3.23E-01	PCI/SA	0.831	1.0E+0	3.252E-2
U-238	7YSR	0	4/13/2006 7:00:00 P	M 9.5343E-02	1.216E-01	1.22E-01	5.71E-01	PCI/SA	0.831	1.0E+0	3.252E-2
31025	9HX81X1	10	J6B2701587	P 0516	AIR	2/27/2	00:00:8 800:00	2/5/20	006 6:10:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PN	/ 2.9152E+00	1.602E+00	1.63E+00	5,964E+00	PCI/SA	1.0	1.0E- -0	2.083E-2
BETA	BDS8	0	4/5/2006 9:14:52 AN	/ 1.3292E+01	1.748E+00	1.989E+00	5,916E+00	PCI/SA	1.0	1.0E-+0	3.372E-2
RA-226	BXTE	0	4/10/2006 2:50:00 P	M -1.184E-01	1.327E-01	1.332E-01	5.743E-01	PCI/SA	1.019	8.33E-1	2.505E-1
RA-228	BXTF	0	4/12/2006 6:42:38 A	M 1.8376E+00	4.353E-01	4.603E-01	1.647E+00	PCI/SA	0.913	1.0E+0	2.505E-1
U-234	7YSR	0	4/13/2006 7:00:54 P	M 0.0E+00	0.0E+00	1.213E-01	2.683E-01	PCI/SA	0.934	1.0E-0	3.237E-2
U-235	7YSR	0	4/13/2006 7:00:54 P	M 0.0E+00	0.0E+00	1.213E-01	2.683E-01	PCI/SA	0.934	1.0E0	3.237E-2
U-238	7YSR	0	4/13/2006 7:00:54 P	M -1.9803E-02	1.98 E -02	1.992E-02	4.742E-01	PCI/SA	0.934	1.0E-0	3.237E-2
31025	HOEHT1	ΑВ	J6C010000317	INTRA-LAB BLA	ANK AIR	2/27/2	00:00:8 800:00	2/5/20	006 6:00:00 AM		
U-234	7YSR	0 B	4/13/2006 7:02:52 P	M 0.0E+00	0.0E+00	8.248E-03	1.825E-02	PCI/SA	0.982	1.0E0	1.0E+0
U-235	7YSR	0 B	4/13/2006 7:02:52 F	M -2.6887E-03	1.901E-03	1.923E-03	3.804E-02	PCI/SA	0.982	1.0E-0	1.0E+0
U-238	7YSR	0 B	4/13/2006 7:02:52 P	M 0.0E+00	0.0E+00	8.248E-03	1.825E-02	PCI/SA	0.982	1.0E-0	1.0E±0
31025	HOEHT1	CS	J6C010000317	INTRA-LAB CH	ECK AIR	2/27/2	00:00:8 600	2/5/20	006 6:00:00 AM		
U-234	7YSR	0 S	4/13/2006 7:02:57 F	M 1.1039E+00	1.017E-01	1.582E-01	5.764E-02	PCI/SA	1.0006E+00 0.938	1.0E0	1.0E+0
U-238	7YSR	0 S	4/13/2006 7:02:57 F	M 8.5669E-01	8.94E-02	1.297E-01	3.75E-02	PCI/SA	1.0479E+00 0.938	1.0E+0	1.0E+0
1											

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Page 3

^{6060317, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 15,
**Results Inserted | ReTestInserted | Updated | NotInserted => 50 | 0 | 0 | 0.
**Diff RptDb | Qtims => .

Alpha Spec, Ulso by ALP , Results 4/13/2006 9:42:49 PM Batch Nbr: 6060317 Summary Report Units Av MLcC MDC QC Yield RYId Parameter Sa Act Uncert Q Wrk Ord Status Meth Matrix Richland Standard Alplso Wo Blk Subt. CRPL Ulso by ALP m 105% (1.01E-01) U4 PCI/SA R 1.03E-01 4.74E-01 U-234 7.91E-02 HX81N1AG Calc SR AIR (1.99E-02) U4 PCI/SA 1.03E-01 4.74E-01 105% U-235 -1.98E-02 HX81N1AG Calc SR AIR 105% 2.68E-01 (1.21E-01) U4 PCI/SA U-238 0.00E+00 Calc SR AIR HX81N1AG R 1.55E-01 5.97E-01 95% PCI/SA SR AIR HX81Q1AG U-234 3.80E-01 (2.17E-01) Calc (1.29E-01) U4 PCI/SA 95% 2.86E-01 U-235 0.00E+00 Calc SR AIR HX81Q1AG R 1.55E-01 5.97E-01 95% (1.53E-01) U4 PCI/SA U-238 1.69E-01 Calc SR AIR HX81Q1AG (1.39E-01) U4 PCI/SA R 3.37E-01 1.00E+00_ 78% HX81R1AG U-234 -4.90E-02 Calc SR AIR R 2.21E-01 7.72E-01 78% U-235 4.89E-02 (1.30E-01) U4 PCI/SA HX81R1AG Calc SR AIR 8.41E-01 78% (5.01E-02) U4 PCI/SA R 2.55E-01 U-238 -9.79E-02 SR AIR HX81R1AG Calc 82% (2.44E-01) U4 PCI/SA R 2.45E-01 8.10E-01 Calc SR AIR HX81T1AG U-234 3.77E-01 82% (3.38E-02) U4 PCI/SA R 1.73E-01 6.66E-01 -4.72E-02 Calc SR AIR HX81T1AG U-235 82% R 2.74E-01 8.68E-01 U-238 4.72E-01 (2.74E-01) PCI/SA HX81T1AG Calc SR AIR (1.24E-01) U4 PCI/SA R 2.40E-01 7.91E-01 80% U-234 2.30E-02 SR AIR HX81V1AG Calc (1.16E-01) U4 PCI/SA 80% U-235 1.15E-01 R 3.12E-01 SR AIR HX81V1AG Calc R 3.79E-01 1.07E+00 , 80% HX81V1AG U-238 1.15E-01 (2.13E-01) U4 PCI/SA Calc SR AIR R 3.23E-01 83% (1.46E-01) U4 PCI/SA U-234 0.00E+00 Calc SR AIR HX81W1AG R 3.23E-01 83% (1.46E-01) U4 PCI/SA U-235 0.00E+00 SR AIR HX81W1AG Calc R 1.24E-01 5.71E-01 83% 9.53E-02 (1.22E-01) U4 PCI/SA U-238 Calc SR AIR HX81W1AG 93% U-234 0.00E+00 (1.21E-01) U4 PCI/SA R 2.68E-01 HX81X1AG SR AIR Çalc 2.68E-01 93% SR AIR HX81X1AG U-235 0.00E+00(1.21E-01) U4 PCI/SA Calc R 1.03E-01 4.74E-01 93% (1.99E-02) U4 PCI/SA Calc SR AIR HX81X1AG U-238 -1.98E-02 92% R 1.57E-01 6.03E-01 (3.05E-02) U4 PCI/SA U-234 -4.27E-02 Calc SR AIR HX8111AG (2.15E-02) U4 PCI/SA R 1.11E-01 5.11E-01 92% U-235 -2.13E-02 Calc SR AIR **HX8111AG** R 1.57E-01 6.03E-01 92% U-238 -4.27E-02 (3.05E-02) U4 PCI/SA Calc SR AIR HX8111AG U-234 3.76E-01 (2.03E-01) PCI/SA R 1.03E-01 4.74E-01 111% Calc SR AIR HX8121AG 111% (1.21E-01) U4 PCI/SA 2.68E-01 Calc SR AIR HX8121AG U-235 0.00E+00111% (1.01E-01) U4 PCI/SA R 1.03E-01 4.74E-01 U-238 7.91E-02 SR Calc AIR HX8121AG (1.84E-02) U4 PCI/SA R 9.51E-02 4.38E-01 97% U-234 -1.83E-02 Calc SR AIR HX8131AG 97% U-235 -3 66E-02 (2.62E-02) U4 PCI/SA R 1,35E-01 5.17E-01 SR HX8131AG Calc AIR R 9.51E-02 4.38E-01 97% (1.84E-02) U4 PCI/SA HX8131AG U-238 -1.83E-02 Calc SR AIR 2.62E-01 101% (1.39E-01) U4 PCI/SA U-234 1.94E-01 Calc SR AIR **HX8141AG** R 101% -1.94E-02 1.01E-01 4.64E-01 U-235 (1.95E-02) U4 PCI/SA SR **HX8141AG** Calc AIR (9.74E-02) U4 PCI/SA 2.62E-01 101% U-238 9.68E-02 **HX8141AG** Calc SR AIR R 1.10E-01 4.81E-01 110% U-234 1.23E+00 (3.72E-01)PCI/SA SR HX8151AG AIR Calc (9.79E-02) U4 PCI/SA 110% R 1.27E-01 5.15E-01 Calc SR AIR **HX8151AG** U-235 6.55E-02 110% SR PCI/SA R 8.98E-02 4.41E-01 Calc AIR HX8151AG U-238 8.52E-01 (3.04E-01)91% U-234 8.28E-01 (3.22E-01) PCI/SA R 1.60E-01 6.16E-01 Calc SR AIR HX8161AG - (1s Uncertainities) RecCnt:51 Page 1 IDC - Instrument Detection Level in Conc Units RADCALC v4.8.18 MLcC- Method Decision Level in Conc Units Q - Qualifier, U is Less Than Lc = 1.645*TPU MDC - Minimum Detectable Concentration All Results Displayed to Three Digits Reguardless of Significants STL Richland *Std - Lc, MDC using StdDev for Set of Blanks Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch	Nbr: 6	060317		Alpha Sp		so by AL nary Rep		, R∈ rt	esi	ults	2	1/13/2	006 9:4	2:49 PM
Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	A۱	/ ILcC	IDC	QC	Yield	RYId
Calc	SR	AIR	HX8161AG	U-235 (0.00E+00	(1.33E-01)	U4	PCI/SA	R		2.95E-01		91%	
Calc	SR	AIR	HX8161AG	U-238	7.45 E -01	(3.00E-01)		PCI/SA	R	1.01E-01	4.98E-01		91%	
Calc	SR	AIR	HX8171AG	U-234 2	2.00E+00	(5.28E-01)		PCI/SA	R	1.49E-01	6.05E-01		92%	
Calc	SR	AIR	HX8171AG	U-235 -	-9.06E-03	(9.12E-03)	U4	PCI/SA	R	7.45E-02	4.56E-01		92%	
Calc	SR	AIR	HX8171AG	U-238	7.69 E-0 2	(1.15E-01)	U4	PCI/SA	R	1.49E-01	6,05E-01		92%	
Calc	SR	AIR	HX8181AG	U-234 ·	-8.91E-03	(8.96E-03)	U4	PCI/SA	R	7.33E-02	4.48E-01		93%	
Calc	SR	AIR	HX8181AG	U-235	0.00E+00	(1.36E-01)	Ų4	PCI/SA	R		3.02E-01		93%	
Calc	SR	AIR	HX8181AG	U-238 ·	-8.91E-03	(8.96E-03)	U4	PCI/SA	R	7.33E-02	4.48E-01		93%	
Calc	SR	AIR	H0EHT1AA	U-234 (0.00E+00	(8.25E-03)	U4	PCI/SA	R		1.83E-02	В	98%	
Calc	SR	AIR	H0EHT1AA	U-235 ·	-2.69E-03	(1.92E-03)	U4	PCI/SA	R	9.90E-03	3.80E-02	В	98%	
Calc	SR	AIR	H0EHT1AA	U-238	0.00E+00	(8.25E-03)	U4	PCI/SA	R		1.83E-02	В	98%	
Calc	SR	AIR	H0EHT1AC	U-234	1.10E+00	(1.58E-01)		PCI/SA	R	1.62E-02	5.76E-02	S	94%	110%
Calc	SR	AIR	H0EHT1AC	U-235	1.72E-02	(1.34E-02)	U4	PCI/SA	R	8.66E-03	4.26E-02	S	94%	38%
Calc	SR	AIR	H0EHT1AC	U-238	8.57E-01	(1.30E-01)		PCI/SA	R	6.12E-03	3.75E-02	\$	94%	82%

Pankerson 4-14:06

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 2

Q - Qualifier, U is Less Than Lc = 1 645 TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:68 RADCALC v4.8.18 STL Richland

Batch Nbr: 6060317	Alpha Spec, Ulso by ALP	, Calculated Results
	Detailed F	Report

4/13/2006 9:42:50 PM

STL Richland

Analy Vol Final/Cou 00 Sa 49 Sa olAdj Decay 01 1.0000E+00 3 01 1.0000E+00 3 01 1.0000E+00 3 01 1.0000E+00 3 LcC/MDC StdDvMd Analy Vol Final/Co .00 Sa 276 Sa VolAdj Decay -01 1.0000E+00 03 -01 1.0000E+00
49 Sa olAdj Decay 01
Analy Vol Final/Co .00 Sa .01 1.0000E+00 .03
Analy Vol Final/Co .00 Sa .00 1 1.0000E+00 3 Analy Vol Final/Co .00 Sa .076 Sa VolAdj Decay .01 1.0000E+00 .03 .01 1.0000E+00 .03 .01 1.0000E+00 .03
3 01 1.0000E+00 3 01 1.0000E+00 3 01 1.0000E+00 3 LcC/MDC StdDvMd Analy Vol Final/Co .00 Sa 276 Sa VolAdj Decay -01 1.0000E+00 03 -01 1.0000E+00
3 01 1.0000E+00 3 LeC/MDC StdDvMd Analy Vol Final/Co .00 Sa 276 Sa VolAdj Decay -01 1.0000E+00 03 -01 1.0000E+00
Analy Vol Final/Co .00 Sa .276 Sa VolAdj Decay -01 1.0000E+00 .03 -01 1.0000E+00
Analy Vol Final/Co .00 Sa 276 Sa VolAdj Decay -01 1.0000E+00 03 -01 1.0000E+00
.00 Sa 276 Sa VolAdj Decay -01 1.0000E+00 03 -01 1.0000E+00 03
276 Sa /olAdj Decay -01
-01 1.0000E+00 03 -01 1.0000E+00 03 -01 1.0000E+00
03 -01 1.0000E+00 03 -01 1.0000E+00
03 -01 1.0000E+00
~
-01 1.0000E+00

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 1

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

E	Batch Ni	br: 606	0317				A	Ipha	Spe	c, U	lso	by ALP	, Ca	ilcula	ated F	Results	3		4/13/2	2006 9:42:	50 PM
So	q Calc I	Date	Parameter	Avg	Sa A	ct	Q	Net C	•	Dpm \		•	Vol	Used		Yield,EnFct	Chem Yld,E	FctU IDC/ILcC	BikLcC/MD	C StdDvMd	IC/LcC
	04/13/0	06	U-232	R	68.6947 (5.1368			3.43855 (1.3135		9.4972		9.497275 (0.461302)	(0.	1.00		95%					
	04/13/0	06	U-234	R	0.37989	•		1.7980		0.0525		0.052522	,	1.00		95%		0.596518			
					(0.2171	•		(1.0090	E-02)	(0.029	872)	(0.029872)	(0.	.027066)				0.155349			
	04/13/0	06	U-235	R	0.00E0 (0.1292			0.00000		0.00E0 (0.017		0.00E00 (0.01787)	(0	1.00 (027066)		95%		0.286005			
	04/13/6	06	U-238	R	0.16882 (0.1533			7.99024 (7.2041		0.0233		0.02334 (0.021155)	(0	1.00 027066.		95%		0.596518 0.155349			
Sq :	Status Me	ethod I	Vatrix 1	rotoco	l Equat	***	Wrk	Ord	Units/M	latrix C	C/BB	Sa/On Date	AnalysisDa	ite/PptWi	t Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy V	ol Final/Co	loV inuc
1	Calc SF 03,P 0512		JR.	*STLE	-	WoBS I			PCI/SA	\	02	/05/06 07:15	04/13/06	18:59	नामान्य र बन्यायम् १८ वस्ता वस्त्र । स्टब्स्		UITC153	1 27 Alq	1.00 Sa 0.062458 Sa		
Sq			Parameter	Sam	iple Cnt	Bkgrnd C	ent i	nstr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
	04/13/06		U-232	598 200.	·	11 999.983	A	LP3	ED	Y	N	3.7651E-01 (1.130E-02)		N	100%	N		1.0000E+00 (0.000E+00)		.0000E+00	
1	04/13/06	17:19	U-234	1 200.		7 999.983	А	LP3	ED	N Y		3.7651E-01 (1.130E-02)		N	78% 7%	N		1.0000E+00 (0.000E+00)		00+ 3 0000.	
2	04/13/06	17:19	U-235	1 200.		3	Α	LP3	ED	N Y	N	3.7651E-01 (1.130E-02)		N	78% 7%	N		1.0000E+00 (0.000E+00)		1.0000E+00	ı
3	04/13/06	17:19	U-238	0		4	Α	LP3	ED	N Y	N	3.7651E-01 (1.130E-02)		N	78% 7%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	ı
s	iq Calc	Date	Parameter	200. Av ş		999,983 Act	Q Q	Net (ont Fit	ı Dpm		•	. Vo	Used	, ,,	Yield,EnFc	t Chem Yld,i	EFctU IDC/ILcC		DC StdDvM	ldC/LcC
	04/13/	/06	U-232	R	57.049 (4.351)			2.9782		7.910 (0.402		7.910239 (0.402246) (0	1.0	0 Sa 6)	78%					
	04/13/	/06	U-234	R	-0.0489 (0.1389	988	U4	-2.0013 (5.655		-0.006 (0.019		-0.006792 (0.019206) (c	1.0 0.02 70 66	0 Sa i)	78%		1.004868 0.336842			
	04/13/	/06	U-235	R	0.0489	23	U4	1.9987 (5.290)		0.006		0.006783 (0.017966) (0	1.0 0.027066.	0 Sa 3)	78%		0.772352 0.220515			
	04/13/	/06	U-238	R	-0.0979 (0.050	911	U4	-4.000 (2.000		-0.010 (0.000		-0.013576 (0.006907		1.0 0.027066.	0 Sa 3)	78%		0.840539 0.254629			
Sq	Status M	ethod	Matrix	Protoc	ol Equa	<u> </u>	Wr	k Ord	Units/	Matrix	QC/BI	3 Sa/On Date	AnalysisD	ate/PptW	t Sep1	/Sep2 Date	QC/Tracer	Vial Mult/Ent	/ld Total/Analy	Vol Final/C	ount Vol
i	Calc S 403,P 0513		AIR	*STLE	E Alpiso	oWoBS 58270158-		T1AG	PCI/S	A	02	/05/06 07:45	04/13/06	18:59			UITC153	1 328 Ala	1.00 Sa 0.061476 Sa		
So			Paramete	r Sar		Bkgrnd (Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAdj		Abn
0	04/13/06			626		3		LP4	ED	Y		3.7951E-01		N	100%	N		1.0000E+00		1.0000E+00)
						6 999.95	·	•		Y	-	(1.139E-02)						(0.000E+00)			
() iDC	- Instrume	ent Dete	es), Q - Qualifi ction Level in (Conc Ur	nits Mile	C - Method	Decisi	on Level	in Conc I	Jnits, MI	 ЭС- М	Page linimum Detectabl y Not be Significal	e Concentrati	on	dha bhar	m. OAbs Tiss	PRINCIPLE MINERAL PRINCIPLE AND THE STATE OF	Rec	2.11.	ADCALC v4 TL Richland	

	Batch Nbr: 60	60317			,	Alph	a Spe	ec, L	llsc	by ALP	, Calcula	ated	Results		4/	13/2006 9:42:	50 PN
	04/13/06 17:19	U-234	4 200.01	4 166666 999.9		ALP4	E D	N Y	N	3.7951E-01 (1.139E-02)	N	82% 7%	N	1.0000E+00 (0.000E+00)		1.0000E+00	
	04/13/06 17:19	U-235	0 200.01	2 166666 999.1		ALP4	ED	N Y	N	3.7951E-01 (1.139E-02)	N	82% 7%	N	1,0000E+00 (0.000E+00)	4.5045E-01 16.266603	1.0000E+00	
	04/13/06 17:19	U-238	5	5 166666 999.		ALP4	ED	N Y	N	3.7951E-01 (1.139E-02)	N	82% 7%	N		4.5045E-01	1.0000E+00	
9	Sq Calc Date	Parameter		Sa Act	Q	Net	Cnt Rt	-	Wo E	` .	Vol Used		Yield,EnFct	Chem Yld,EFctU IDC/ILc0		C/MDC StdDvMd	C/Lc(
	04/13/06	U-232		60.369239		•	74E+00	8.238 (0.41)		8.238957) (0.412015)		0 Sa	82%			·	
	04/13/06	U-234		(4.571103) 0.3773	U4	1.599		0.051	492	0.051492		0 Sa	82%	0.80996			
	04/13/06	U-235		(0.244009) -0.04717	U4	-2.00	97E-02) 010E-03	(0.03 -0.00	6438	-0.006438	(0.027066 1.0	6) 10 Sa	82%	0.24536 0.66632	3		
	04/13/06	U-238		(0.033751) 0.471624		•	43E-03) 177E-02	(0.00 0.064		(0.004592) 0.064365	(0.027066 1.0	6) 90 S a	82%	0.173496 0.86785			
				(0.273785)			01E-02)	(0.03			(0.02706	· · · · · · · · · · · · · · · · · · ·		0.27432			
q	Status Method	Matrix 1	Protocol	Equation Se	et W	rk Ord	Units/	viatrix	QC/B	8 Sa/On Date	AnalysisDate/PptV	/t Sep1	/Sep2 Date	QC/Tracer Vial Mult/Ent	Yld Total/An	aly Vol Final/Co	unt V
	Calc SR 403,P 0514	AIR	*STLE	AlpisoWoBS			PCI/S AIR	A	0:	2/05/06 08:15	04/13/06 18:59			1 UITC15329 Alq	1.00 0.06239	0 Sa 9 Sa	
S	q Cnt Date	Parameter	Samp	ole Cnt Bkgr	nd Cnt	Instr	Geom	Trc/A	/ En	t Efficiency1	Efficiency 2 Ent	YId Fct	Ent E	3lk Value Ingr Fct	Conv Fct/Vol	Adj Decay	Ab
\$	q Cnt Date 04/13/06 17:19		Samp 630 / 200.1	3		Instr ALP5	Geom ED	Trc/Av Y Y		3.9200E-01 (1.176E-02)	Efficiency 2 Ent N	YId Fct	Ent E	1.0000E+00			Ab
S		U-232	630 / 200.1 1	3 1000 4	0.25		-	Υ	N	3.9200E-01				1.0000E+00 (0.000E+00) 1.0000E+00	4.5045E-01	1.0000E+00	Att
)	04/13/06 17:19	9 U-232 9 U-234	630 / 200.1 1 200.1	3 1000 4 1000 0	0.25 0.25	ALP5	ED	Y Y N Y	N	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01	N	100% 80% 7% 80%	N	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01	1.0000E+00 1.0000E+00	Ab
)	04/13/06 17:19 04/13/06 17:19	U-232 U-234 U-235	630 / 200.1 1 200.1 1 200.1 3	3 1000 4 1000 0 1000 10	0.25 0.25 0.25	ALP5 ALP5	ED ED	Y Y N Y N Y	N N N	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01	N	100% 80% 7% 80% 7% 80%	N N	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00)	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803	1.0000E+00 1.0000E+00 1.0000E+00	Ab
2	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19	U-232 U-234 U-235 U-238	630 / 200.1 1 200.1 1 200.1 3 200.1	3 1000 4 1000 0 1000 10	0.25 0.25 0.25 0.25	ALP5 ALP5 ALP5 ALP5	ED ED ED	Y Y N Y N Y N Y N Y	N N N	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02)	N N N	100% 80% 7% 80% 7%	N N N	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) (0.000E+00)	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803	1.0000E+00 1.0000E+00 1.0000E+00	
)	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19	U-232 U-234 U-235	630 / 200.1 1 200.1 1 200.1 3 200.1 Avg	3 1000 4 1000 0 100 10 1000 Sa Act	0.25 0.25 0.25	ALP5 ALP5 ALP5 ALP5 Ne	ED ED ED t Cnt Rt	Y Y N Y N Y N Y Dpm 8.02	N N N N	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) Blk Dpm-Bik	N N N N Vol Used	100% 80% 7% 80% 7% 80% 7%	N N N	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00)	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803	1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00	
2	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19	U-232 U-234 U-235 U-238	630 / 200.1 1 200.1 1 200.1 3 200.1 Avg	3 1000 4 1000 0 100 1000 Sa Act 57.923713 (4.382032) 0.022995	0.25 0.25 0.25 0.25 0.25	ALP5 ALP5 ALP5 ALP5 Ne 3.146 (1.25	ED ED ED t Cnt Rt 643E+00 45E-01) 501E-04	Y Y N Y N Y N Y Opn 8.023 (0.40	N N N N 3983 00447	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) Blk Dpm-Blk 8.023983 7) (0.400447) 0.003185	N N N Vol Used 1.0 (0.02706	100% 80% 7% 80% 7% 80% 7% 00 Sa 6)	N N N N Yield,EnFct	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yld,EFctU_IDC/ILc	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803	1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00	
2	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 Sq Calc Date 04/13/06	U-232 U-234 U-235 U-238 Parameter U-232	630 / 200.1 1 200.1 1 200.1 3 200.1 Avg	3 1000 4 1000 0 100 10 5a Act 57.923713 (4.382032) 0.022995 (0.123985) 0.115089	0.25 0.25 0.25 0.25 0.25	ALP5 ALP5 ALP5 ALP5 Ne 3.148 (1.25 1 9.988 (5.38 1 4.99	ED ED ED t Cnt Rt 643E+00 45E-01) 501E-04 (27E-03) 750E-03	Y Y N Y N Y N Y Dpm 8.023 (0.40 0.003 (0.01	N N N N 3983 00447 7174	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) Bik Dpm-Bik 8.023983 7) (0.400447) 0.003185 4) (0.017174)	N N N Vol Used 1.0 (0.02706 1.0 (0.02706	100% 80% 7% 80% 7% 80% 7% 00 Sa 6) 00 Sa 6) 00 Sa	N N N N Yield,EnFct	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yld,EFctU IDC/ILc	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 C BikLe	1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00	
)	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 Sq Calc Date 04/13/06 04/13/06	U-232 U-234 U-235 U-238 Parameter U-232 U-234	630 / 200.1 1 200.1 1 200.1 3 200.1 Avg	3 1000 4 1000 10 1000 5a Act 57.923713 (4.382032) 0.022995 (0.123985)	0.25 0.25 0.25 0.25 0.25 0.	ALP5 ALP5 ALP5 ALP5 Ne 3.146 (1.25 4 9.986 (5.38 4 4.996 4 4.996 4 4.996	ED ED ED t Cnt Rt 643E+00 45E-01) 501E-04 627E-03)	Y Y N Y N Y N Y Dpn 8.023 (0.40 0.003 (0.01	N N N N N 3983 0447 7174 5943 6012	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) Blk Dpm-Blk 8.023983 7) (0.400447) 0.003185 4) (0.017174) 0.015943 2) (0.016012)	N N N N Vol Used 1.0 (0.02706 1.0 (0.02706 1.0 (0.02706 1.1	100% 80% 7% 80% 7% 80% 7% 00 Sa 6) 00 Sa 6) 00 Sa 6) 00 Sa	N N N N Yield,EnFct 80%	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00) Chem Yid,EFctU IDC/ILc	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 C BikLe	1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00	
)	04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 04/13/06 17:19 Sq Calc Date 04/13/06 04/13/06	D-232 D-234 D-235 D-238 Parameter U-232 U-234 U-235 U-238	630 / 200.1 1 200.1 1 200.1 3 200.1 Avg R	3 1000 4 1000 0 10 1000 5a Act 57.923713 (4.382032) 0.022995 (0.123985) 0.115089 (0.115776) 0.115032 (0.212593)	0.25 0.25 0.25 0.25 0.25 0.25	ALP5 ALP5 ALP5 ALP5 Ne 3.144 (1.25 4 9.984 (5.38 4 4.994 (4.99 4 9.21	ED ED ED t Cnt Rt 343E+00 45E-01) 501E-04 (27E-03) 750E-03 (75E-03) 500E-03	Y Y N Y N Y Dpm 8.023 (0.40 0.003 (0.01 0.01) 0.01	N N N N N 3983 0447 7174 5943 6012	3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) 3.9200E-01 (1.176E-02) Bik Dpm-Bik 8.023983 7) (0.400447) 0.003185 4) (0.017174) 0.015943 2) (0.016012)	N N N N Vol Used 1.0 (0.02706 1.0 (0.02706 1.0 (0.02706	100% 80% 7% 80% 7% 80% 7% 00 Sa 6) 00 Sa 6) 00 Sa 6) 00 Sa	N N N N Yield,EnFct 80% 80%	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00) 1.0000E+00) 1.0000E+00) Chem Yld,EFctU IDC/Lcc 0.79062 0.23950 0.31189	4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 4.5045E-01 16.025803 C BikLe	1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00	

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

	Batch Nbr: 6	060317			Alpha	a Spe	c, U	Isc	by ALP	, Ca	alcula	ated F	Result	S		4/13	/2006 9:42:	50 PN
Sq	Status Method	Matrix	Protocol Equa	tion Set W	rk Ord	Units/M	atrix C	IC/BI	3 Sa/On Date	AnalysisDa	ate/PptWt	Sep1/S	Sep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	Vol Final/Cou	unt Vo
5 5364	Caic SR 103,P 0515	AIR	*STLE Alpiso	oWoBS HX8 6B270158-6 v4.		PCI/SA AIR		02	2/05/06 08:40	04/13/06	19:00		***************************************	UITC15	1 330 Alq	1.00 S 0.062523 S		
S	Cnt Date	Paramete	r Sample Çnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/13/06 17:1	9 U-232	608 200.15	3 1000.15	ALP7	ED	Y Y	N	3.6324E-01 (1.090E-02)		N	100%	N		1.0000E+00 (0.000E+00)		1,0000E+00	
1	04/13/06 17:1	9 U-234	0 200.15	0 1000.15	ALP7	ED	N Y	N	3.6324E-01 (1.090E-02)		N	83% 7%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/13/06 17:1	9 U-235	0 200.15	0 1000.15	ALP7	ED	N Y	N	3.6324E-01 (1.090E-02)		N	83% 7%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/13/06 17:1	9 U-238	1 200.15	1 1000.15	ALP7	ED	N Y	N	3.6324E-01 (1.090E-02)		Ν	83% 7%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
;	Sq Calc Date	Parametei	r Avg Sa	Act Q	Net	Cnt Rt	Dpm	Wo E	3lk Dpm-B	k Vo	! Used		Yield,EnFo	t Chem Yld	,EFctU IDC/ILcC	BikLcC/N	IDC StdDvMc	dC/LcC
	04/13/06	U-232	R 60.19			72E+00 ?1E-01)	8.354 (0.421		8.35459) (0.421747	') (C	1.00 0.027066		83%					
	04/13/06	U-234	R 0.00E (0.145		0.0000 (0.000	00E+00 00E+00)	0.00E (0.020		0.00E00) (0.020263	3) (C	1.00 0.027066.		83%		0.323023	3		
	04/13/06	U-235	R 0.00E (0.145		4 0.0000 (0.000	00E+00 00E+00)	0.00E (0.020		0.00E00) (0.020263	3) (0	1.00 0.027066) Sa	83%		0.323023	3		
	04/13/06	U-238	R 0.095		4 3.9964 (5.095	40E-03 33E-03)	0.013 (0.016		0.013234) (0.016918	3) (0	1.00 0.027066		83%		0.570972 0.124048			
Sq	Status Method	Matrix	Protocol Equa	ation Set V	Yrk Ord	Units/N	latrix	QC/B	B Sa/On Date	AnalysisD	ate/PptW	t Sep1/	Sep2 Date	QC/Trace	rVial Mult/Ent\	Yid Total/Analy	Vol Final/Co	unt Vo
7 536	Calc SR 403,P 0516	AIR	•	oWoBS HX8 16B270158-7 v4.		PCI/S/ AIR	1	0:	2/05/06 06:10	04/13/06	19:00			UITC15	1 3331 Alq	1.00 S 0.062372 S		
s	q Cnt Date	Paramete	r Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
0	04/13/06 17:2	0 U-232	738 🛩 200.05	5 1000.1333	ALP8	ED	Y Y	N	3.9047E-01 (1.171E-02)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
1	04/13/06 17:2	0 U-234	0 200.05	0 1000.1333	ALP8	ED	N Y	N	3.9047E-01 (1.171E-02)		N	93% 8%	N			4.5045E-01 16.032859	1.0000E+00	
2	04/13/06 17:2	0 U-235	0 200.05	0 1000.1333	ALP8	ED	N Y	N	3.9047E-01 (1.171E-02)		N	93% 8%	N			4.5045E-01 16.032859	1.0000E+00	
3	04/13/06 17:2	20 U-238	0 200.05	1 1000.1333	ALP8	ED	N Y	N	3.9047E-01 (1.171E-02)		N	93% 8 %	N			4.5045E-01 16.032859	1.0000E+00	I
	** 11 * 1	1-0 0 0 m		71	0.15 - 775'				Page	4		and the second of the second o			Pasi	Cnt:7	RADCALC v4.	.8.18
OD Sr-	🗅 - İnstrument De	tection Level in	ier, U Result is L Conc Units, MLc Combination of E	cC - Method Dec	ision Leve	l in Conc U	Inits, Mi sult Dig	DC- N	aye Inimum Detectab Iy Not be Significa	le Concentrati	on ne - mm/da	t/yy hh:mr	n, 24hr Time	e e	neu	•	STL Richland	

E	atch Nbr: 600	50317				Alp	oha Spe	c, U	lso	by ALP	, Ca	lcula	ated F	Results	3		4/13/2	2006 9:42:5	50 PM
Sc	Calc Date	Parameter	Avg	Sa Act	Q	•	Net Cnt Rt	Dpm V		-	Vol	Used		Yield,EnFct	Chem Yid,	EFctU IDC/ILcC	BlkLcC/MD	C StdDvMd	C/LcC
	04/13/06	U-232	R	68.139041 (5.049476)				9.4349 (0.448		9.434925 (0.448438)	(0.	1.00 027066)		93%					
	04/13/06	U-234	R	0.00E00 (0.121252)	-			0.00E0 (0.016	-	0.00E00 (0.016789)	(0.	1.00 (027066)		93%		0.268294			
	04/13/06	U-235	R	0.00E00 (0.121252			00000E+00 .0000E+00)	0.00E0 (0.016		0.00E00 (0.016789)	(0.	1. 0 0 027066.		93%		0.268294			
	04/13/06	U-238	R	-0.019803 (0.019918).99867E-04).9987E-04)	-0.002 (0.002		-0.002742 (0.002754)	(0	1.00 027066.		93%		0.474184 0.103006			
q :	Status Method	Matrix F	rotoco	ol Equation	Set	Vrk O	rd Units/M	atrix C	C/BE	3 Sa/On Date	AnalysisDa	ate/PptW	Sep1/	Sep2 Date	QC/Traces	r Vial Mult/EntY	ld Total/Analy V	ol Final/Co	unt Vol
	Calc SR / 03,P 0517	AIR	*STLE	AlpisoWo	DBS HX 70158-8 v4		AG PCI/SA AIR	I	02	/05/06 06:15	04/13/06	19:01			UITC15	1 332 Alq	1.00 Sa 0.062366 Sa		
Sq	Cnt Date	Parameter	San	nple Cnt Bi	cgrnd Cnt	lns	tr Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
)	04/13/06 17:21	U-232	680 200.	.1166666 1		ALF	9 ED	Y Y	N	3.6711E-01 (1.101E-02)		N	100%	N		1.0000E+00 (0.000E+00)		.0000E+00	
	04/13/06 17:21	U-234	0 200.	2 .1166666 1		ALF	P9 ED	N Y	N	3.6711E-01 (1.101E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)		.0000E+00	
2	04/13/06 17:21	U-235	0 200.	1 .1166666 1		ALF	9 ED	N Y	N	3.6711E-01 (1.101E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/13/06 17:21	U-238	0	.1166666 1		ALF	9 ED	N Y	N	3.6711E-01 (1.101E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)	•	1.0000E+00	
s	q Calc Date	Parameter				1	Net Cnt Rt	Dpm	Wa E	3lk Dpm-Bl	k Vo	l Used		Yield,EnFc	t Chem Ylo	1,EFctU IDC/ILc	C BIKLcC/MI	OC StdDvM	dC/LcC
	04/13/06	U-232	R	66.85478 (5.004359			3.39802E+00 1.3031E-01)	9.256 (0.450		9.256201) (0.450672	') (0	1.0 0.02 7 066	0 Sa 5)	92%					
	04/13/06	U-234	R	-0.042672 (0.030525			1.99970E-03 1.4140E-03)	-0.008 (0.004				1.0 0.02706	0 Sa 3)	92%		0.60265 0.15692			
	04/13/06	U-235	R	-0.021336 (0.02146	_	-	9.99850E-04 9.9985E-04)	-0.00: (0.00:0)				1.0 0.02706	0 Sa 5)	92%		0.51 07 79 0. 110 96			
	04/13/06	U-238	R	-0.042673 (0.03052	_		1.99970E-03 1.4140E-03)	-0.00 (0.00				1.0 0.02706	00 Sa 6)	92%		0.60265 0.15692	9		
Sq	Status Method	Matrix	Protoc	col Equation	n Set	Wrk (Ord Units/1	Matrix	QC/B	B Sa/On Date	AnalysisE	ate/PptV	Vt Sep1	/Sep2 Date	QC/Trace	er Vial Mult/Ent	Yld Total/Analy	Vol Final/Co	ount Ve
	Calc SR 403,000357	AIR	*STL	E AlpisoW	OBS H			A	0:	2/05/06 06:05	04/13/0	6 19:01			UITC1	1 5333 Alq	1.00 Sa 0.061634 Sa		
S	q Cnt Date	Paramete	r Sa	mple Cnt E	kgrnd Cn	t In	str Geom	Trc/A	Eπ	t Efficiency1	Efficiency 2	e Ent	Yld Fct	Ent Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Ab
0	04/13/06 17:21	1 U-232		3	2 999.7333		P10 ED	Y Y	N	3.6900E-01 (1.107E-02)		N	100%	N	A STATE OF THE PROPERTY OF THE	1.0000E+00 (0.000E+00)		1.0000E+00)
0	- (1s Uncertainiti	ies), Q - Qualifi	ier, U P	Result is Less	Than Lc =	1.645	* TPU			Page						Rec		ADCALC v4	
ĬĎC Sr-I	\ Instrument Det	ection Level in a	Concil	Inite MI cC -	Method D	nisina	a Level in Concit	Jnits, M esult Dig	DC- N jits Ma	dinimum Detectab ay Not be Significa	le Concentrat nts, Date/Tin	ion ne - mm/c	ld/yy hh:m	m, 24hr Time	e		S	TL Richland	

	Batch Nbr: 60	60317		· · · · · · · · · · · · · · · · · · ·		Alpha	a Spe	c, U	lsc	by ALP	, Ca	lcula	ated F	Results	,		4/1	3/2006 9:42:5	50 PM
1	04/13/06 17:21	U-234	4 200.18	1 833333 999		ALP10	ED	N Y	N	3.6900E-01 (1.107E-02)		N	111% 10%	N		.0000E+00 0.000E+00)	4.5045E-01 16.22471	1.0000E+00	
2	04/13/06 17:21	U-235	0 200.1	0 833333 999		ALP10	ED	N Y		3.6900E-01 (1.107E-02)		N	111% 10%	N		.0000E+00 0.000E+00)	4.5045E-01 16.22471	1.0000E+00	
3	04/13/06 17:21	U-238	1 200.1	1 833333 999		ALP10	ED	N Y	N	3.6900E-01 (1.107E-02)		N	1 11 % 10%	N		.0000E+00 0.000E+00)	4.5045E-01 16.22471	1.0000E+00	
:	Sq Calc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm	Wo E	Blk Dpm-Bil	C Vol I	Used		Yield,EnFct	Chem Yld,EF	ctU IDC/ILcC	BikLcC/	MDC StdDvMd	3C/LcC
	04/13/06	U-232		81.386688 (5.952327)			23E+00 32E-01)	11.13 (0.51				1.00 027066		111%					
	04/13/06	U-234	R	0.375943			14E-02	0.051		0.05144		1.00		111%		0.473992			
				(0.202942)		•	I1E-02)	(0.02		•) (0.0	027066	•			0.102995			
	04/13/06	U-235		0.00E00 (0.121174)	U	0.000	00E+00 00E+00)	0.00E (0.01		0.00E00 (0.01658)	(0.	1.00 027066		111%		0.268123	3		
	04/13/06	U-238		0.079127 (0.101261)	U	3.995 (5.094	15E-03 16E-03)	0.010 (0.01		0.010827) (0.013842) (0.	1.00 027066) Sa)	111%		0.473992 0.102995			
Şq	Status Method	Matrix	Protoco	Equation S	et Y	/rk Ord	Units/N	Aatrix	QC/B	B Sa/On Date	AnalysisDa	te/PptW	t Sep1/	Sep2 Date	QC/Tracer V	ial Mult/Ent\	/ld Total/Ana	ly Vol Final/Co	ount Vol
	Calc SR 3403,000358	AIR	*STLE	AlpisoWoB	S HX8 158-10 v		PCI/S/ AIR	Ą	02	2/05/06 06:40	04/13/06	19:01			UITC15334	1 \$ Alq	1.00 0.062529		
s	q Cnt Date	Parameter	Sami	ple Cnt Bkg	rnd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent E	3lk Value	Ingr Fct	Conv Fct/VolA	dj Decay	Abn
0	04/13/06 17:21	1 U-232	792 200.2	7 2833333 100	Ю.1	ALP11	ED	Y	N	4.0388E-01 (1.212E-02)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
1	04/13/06 17:2	1 U-234	0	12833333 100		ALP11	ED	N Y	N	4.0388E-01 (1.212E-02)		N	97% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01 15.992567	1.0000E+00	ı
2	04/13/06 17:2	1 U-235	0 200.2	2 2833333 100	0.1	ALP11	ED	N Y	N	4.0388E-01 (1.212E-02)		N	97% 8 %	N		1.0000E+00 (0.000E+00)	4.5045E-01 15.992567	1.0000E+00)
3	04/13/06 17:2	1 U-238	0	1 2833333 100	10.1	ALP11	ED	N Y	N	4.0388E-01 (1,212E-02)		N	97% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01 15.992567	1.0000E+00	1
	Sq Calc Date	Parameter			,o.,	Net	Cnt Rt	-	Wol	,	k Vol	Used		Yield,EnFct	Chem Yld,E	FetU IDC/ILc	C BikLcC	MDC StdDvM	ldC/LcC
	04/13/06	U-232		70.408713 (5.174018)		•	40E+00 54E-01)	9.773 (0.45			') (O.	1.0	0 Sa 3)	97%					
	04/13/06	U-234		-0.018302 (0.018408)	U	4 -9.99 (9.99	900E-04 90E-04)	-0.00 (0.00				1.0 027066.	0 Sa 6)	97%		0.43783 0.09514			
	04/13/06	U-235	R	-0.036604	U		980E-03 41E-03)	-0.00 (0.00				1.0 027066.	0 Sa 3)	97%		0.51660 0.13455			
	04/13/06	U-238	R	(0.026182) -0.018302 (0.018408)	u	4 -9.99	•	-0.00	2541	-0.00254			0 Sa	97%		0.43783 0.09514	6		
	/4 p. † 1 1 - 14	(a) O O			1	045 * TO				Page	6					Rec	Cnt:11	RADCALC v4	1.8.18
ID.	- (1s Uncertainit C - Instrument Det	tection Level in (Conc Uni	its. MLcC - Me	thod Dec	ision Leve	et in Concil	Jnits, M	DC- N	_	e Concentratio	on n	dás chhime	n 24hr Time		. 100		STL Richland	

1 Calc 36403,00 Sq 0 04/1		Parameter	*STLE A	plsoWoBS HXI ,J6B270158-11 v Cnt Bkgrnd Cnt 8 1000.15 0 1000.15 1	4.8.18	PCI/S/AIR Geom ED	A	02 Ent	3.7397E-01 (1.122E-02)	Analysis Date/Ppt 04/13/06 19:01 Efficiency 2 Ent N	Yld Fct		QC/Traces UITC150	1 335 Alq Ingr Fct		a a	unt Vol
36403,00 Sq 0 04/1 04/1	Cnt Date 13/06 17:21 13/06 17:21 13/06 17:21 13/06 17:21	Parameter U-232 U-234 U-235	763 200.1 2 200.1 0 200.1	,J6B270158-11 v Cnt Bkgrnd Cnt 8 1000.15 0 1000.15	4.8.18 Instr ALP12 ALP12	AIR Geom ED	Trc/Av Y Y N	Ent N	3.7397E-01 (1.122E-02)	Efficiency 2 Ent				335 Alq Ingr Fct	0.062172 S Conv Fct/VolAdj 4.5045E-01	a Decay	Abn
04/1	13/06 17:21 13/06 17:21 13/06 17:21 13/06 17:21	U-232 U-234 U-235	763 200.1 2 200.1 0 200.1	8 1000.15 0 1000.15 1	ALP12	ED	Y Y N	N	3.7397E-01 (1.122E-02)				Blk Value		4.5045E-01	······································	Abn
04/1 2 04/1	13/06 17:21 13/06 17:21 13/06 17:21	U-234 U-235	200.1 2 200.1 0 200.1	1000.15 0 1000.15 1	ALP12		Y N		(1.122E-02)	N	100%	N	· · · · · · · · · · · · · · · · · · ·	1.0000E+00		1.0000E+00	
· 04/1	13/06 17:21 13/06 17:21	U-235	200.1 0 200.1	1000.15 1		ED		N	-					(0.000E+00)	16.084514		
	13/06 17:21		200.1	•	ALP12				3.7397E-01 (1.122E-02)	N	101% 9%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3 04/1		U-238	1			ED	N Y	N	3.7397E-01 (1.122E-02)	N	101% 9%	N		1.0000E+00 (0.000E+00)		1,0000E+00	
	Calc Date		200.1	0 1000.15	ALP12	ED	N Y	N	3.7397E-01 (1.122E-02)	N	101% 9%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
Sq		Parameter	Avg	Sa Act Q	Net	Cnt Rt	Dpm	Wo E	Blk Dpm-Bil	k Vol Used		Yield,EnFo	t Chem Yid	,EFctU IDC/ILcC	BlkLcC/N	ADC StdDvMc	IC/LcC
0	4/13/06	U-232		719333 441887)		09E+00 07E-01)	10.17				00 Sa 36)	101%					
0	4/13/06	U-234	R 0.1	93642 U 138517)	9.995 (7.067	00E-03 75E-03)	0.026 (0.019		0.02 6 727) (0.019058		00 Sa 36)	101%		0.262385	;		
0	4/13/06	U-235	R -0.4 (0.4	019371 U 019484)	9.998 (9.998	350E-04 35E-04)	-0.002 (0.002				00 Sa 66)	101%		0,463763 0,100749			
0	14/13/06	U-238	R 0.0	196821 U 097385)	4.99 7 (4.997	50E-03 75E-03)	0.013 (0.013		0.013363 (0.01342)	1. (0.0270)	.00 Sa 36)	101%		0,262384	l.		
q Statu	us Method	Matrix	Protocol E	quation Set	Wrk Ord	Units/	Matrix	QC/B	B Sa/On Date	AnalysisDate/Ppt	Wt Sep1	/Sep2 Date	QC/Trace	r Vial Mult/EntY	'id Total/Analy	Vol Final/Co	unt Vo
12 Calc 36403,0		AIR	*STLE A	plsoWoBS HX ,J6B270158-121		PCI/S	A	02	2/05/06 07:50	04/13/06 19:02			UITC15	1 336 Alq	1.00 S 0.062367 S		*********
Sq	Cnt Date	Paramete	r Sample	Cnt Bkgrnd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2 Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn
04/	13/06 17:22	2 U-232	834 <i>~</i> 200.266	20 6666 2500.0833	ALP69	ED	Y Y	N	3.7411E-01 (1.122E-02)	N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
1 04/	13/06 17:22	2 U-234	13 200.266	3 6666 2500.0833	ALP69	ED	N Y	N	3.7411E-01 (1.122E-02)	N	110% 10%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2 04/	13/06 17:22	2 U-235	1 200.266	4 6666 2500.0833	ALP69	ED	N Y	N	3.7411E-01 (1.122E-02)	N	110% 10%	Ν		1.0000E+00 (0.000E+00)		1.0000E+00	
3 04/	13/06 17:22	2 U-238	9	2 6666 2500.0833	ALP69	ED	N Y	N	3.7411E-01 (1.122E-02)	N	110% 10%	N			4.5045E-01	1.0000E+00	
				is Less Than Lc = MLcC - Method De			.,,		Page			-	541 K 	Rec	Ont:12 1	RADCALC v4.	8.18

Ва	atch Nbr: 60	60317				Alpha	Spe	c, U	Isc	by ALP	, Ca	alcula	ited F	Results	3		4/13/	2006 9:42:	51 PM
Sq	Calc Date	Parameter	Avg	Sa Act	Q	•	nt Rt	Dpm '		-	Vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILcC	BikLcC/MD	C StdDvMc	dC/LcC
	04/13/06	U-232	R	80.244177		4.1564 (1.442		11.110		11.110185 (0.509599)	/0	1.00		110%				-	
	04/13/06	U-234	В	(5.861894) 1.23005		6.3713	,	0.1703		0.170306	(0	1.00		110%		0.480995			
		0 204		(0.372161)		(1.801)		(0.050		(0.050609)	(0	.027066)		7.470		0.109939			
	04/13/06	U-235	R	0.065513	Ų4	3.3934 (5.057		0.0090		0.009071 (0.013543)	10	1.00 (027066)		110%		0.514989 0.126946			
	04/13/06	U-238	А	(0.097885) 0.852167		4.4140		0.1179		0.117987	U)	1.00		110%		0.44067			
	0-1, 10,00	0 200	•	(0.303585)		(1.499		(0.041			(0	.027066)		, , , , ,		0.089765			
Sq St	tatus Method	Matrix I	Protoco	ol Equation Set	W	k Ord	Units/N	latrix (C/BE	Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	r Vial Mult/EntY	ld Total/Analy \	/ol Final/Co	ount Vol
	alc SR 3,000361	AIR	*STLE	AlpisoWoBS			PCI/S/	4	02	/05/06 08:20	04/13/06	19:02			UITC15	1 337 Alq	1.00 Sa 0.061934 Sa		***************************************
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrr	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0 0	4/13/06 17:22	2 U-232	674	20 0666666 2500		ALP71	ED	Y Y		3.6536E-01 (1.096E-02)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
1 0	4/13/06 17:22	2 U-234	8	5 0666666 2500		ALP71	ED	N Y	N	3.6536E-01 (1.096E-02)		N	91% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00)
2 0	94/13/06 17:22	2 U-235	0	0 0 0666666 2500		ALP71	ED	N Y		3.6536E-01 (1.096E-02)		N	91% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00)
3 0	94/13/06 17:22	2 U-238	7	2 0666666 2500		ALP71	ED	N Y		3.6536E-01 (1.096E-02)		N	91% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
Sq	Calc Date	Parameter			Q.0100	Net	Cnt Rt	-	Wo 8		c Vo	l Used		Yield,EnFc	t Chem Yid	,EFctU IDC/ILc0		DC StdDvM	ldC/LcC
	04/13/06	U-232	R	66.902886 (5.017089)			38E+00 8E-01)	9.198		9.198721 (0.449801)) (0	1.00) Sa	91%		·			
	04/13/06	U-234	R	0.828102 (0.32171)		3.7986	6E-02)	0.113		0.113859 (0.043757)	·) (0	1.00 0.027066) Sa)	91%		0.615791 0.160346			
	04/13/06	U-235	R	0.00E00 (0.133451)	U4	0.000		0.00E (0.01)		0.00E00 (0.018349) Sa	91%		0.295289	9		
	04/13/06	U-238	R	0.745298		3.418	33E-02 6E-02)	0.102	474	0.102474 (0.0408)	,		0 Sa	91%		0.497992 0.101412			
Sq S	tatus Method	Matrix	Protoc	(0.299752) of Equation Se	t W	rk Ord		`		B Sa/On Date				/Sep2 Date	QC/Trace	r Vial Mult/Ent		Vol Final/C	ount Vo
·	aic SR	AIR		•			PCI/S			2/05/06 08:45	04/13/06		·			1	1.00 S	я	
t	3,000362	AID.	SILE	AlpisoWoBS J6B2701,	5 HX8 158-14 v4	171AG .8.18	AIR	n	Už	200/00 06.45	04/13/00	אט.טג			UITC15	338 Alq	0.062317 Sa		
Sq	Cnt Date	Paramete	r San	nple Cnt Bkgr	nd Cnt	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0 (04/13/06 17:2	2 U-232		12 .1668666 2500		ALP83	ED	Y Y	Ν	3.4771E-01 (1.043E-02)	- Today b Library on a series	N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	0
IDC -	Instrument Def	ection Level in (er, U Re	esult is Less Tha	n Lc = 1.0 hod Deci	sion Leve	in Conc t	Jnits, M	DC-M	Page & finimum Detectable y Not be Significan	e Concentrati	lon		. 045 =		Rec		ADCALC v4	

[E	Batch Nbr; 60	60317				Α	lpha	Spe	ec, L	lls	by ALP	, Ca	alcula	ited f	Results			4/1	3/2006 9:42:	51 PM
1	04/13/06 17:22	U-234	18 200.1	1666666	4 2500.233		.P83	ED	N Y	N	3.4771E-01 (1.043E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/13/06 17:22	U-235	0 200.1		1 2500.233		.P83	ED	N Y	N	3.4771E-01 (1.043E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/13/06 17:22	U-238	1 200.1		4 2500.233		.P83	ED	N Y	N	3.4771E-01 (1.043E-02)		N	92% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
S	q Calc Date	Parameter	Avg	Sa Ac	et	Q	Net (Ont Rt	Dpm	Wo E	Blk Dpm-Blk	Vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILc0		MDC StdDvMd	C/LcC
	04/13/06	U-232	R	66.7845 (5.0377			3.2125 (1.2679		9.239 (0.45		9.239206) (0.458028)	(0.	1.00 (027066.		92%					
	04/13/06	U-234		2.00104 (0.5279			8.8325 (2.121		0.276 (0.07		0.276831) (0.071315)	(0	1.00 (027066.		92%		0.604555 0.149004			
	04/13/06	U-235		-0.0090 (0.0091			-3.9996 (3.9996		-0.00 (0.00			(0	1.00 (027066.		92%		0.45564 0.074502			
	04/13/06	U-238	R	0.07693 (0.1149			3.3959 (5.059		0.010 (0.01		0.010644) (0.015889)	(0	1.00 (027066)		92%		0.604558 0.149003			
Sq	Status Method	Matrix	Protoco	l Equati	on Set	Wrk	Ord	Units/N	Matrix	QC/B	B Sa/On Date	AnalysisDa	ate/PptWt	Sep1/	Sep2 Date	QC/Tracer	Vial Mult/Ent\	/ld Total/Anal	y Vol Final/Co	unt Vol
15 6364	Calc SR / 03,000363	AIR	*STLE	•	WoBS H 3270158-15			PCI/S/ AIR	٩	02	2/05/06 06:45	04/13/06	19:02	***************************************	94496C99-20 48-988 9Jaha 30	UITC153	1 339 Alq	1.00 0.062572		
Sq	Cnt Date	Parameter	Sam	ple Cnt	Bkgrnd Cr	t Ir	nstr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent E	lik Value	Ingr Fct	Conv Fct/VolA	dj Decay	Abn
0	04/13/06 17:22	U-232	649 199.8		12 2500.033		-P84	ED	Y Y	N	3.4843E-01 (1.045E-02)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 15.981632	1.0000E+00	
1	04/13/06 17:22	U-234	0 199.8		1 2500.033		_P84	ED	N Y	N	3.4843E-01 (1.045E-02)		N	93% 8%	Ν		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/13/06 17:22	U-235	0 199.8	86 66 666	0 2500.033		_P84	ED	N Y	N	3.4843E-01 (1.045E-02)		N	93% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/13/06 17:22	U-238	0 199.8	8666666	1 2500.033		.P84	ED	N Y	N	3.4843E-01 (1.045E-02)		N	93% 8%	N		1.0000E+00 (0.000E+00)		1,0000E+00	
s	q Calc Date	Parameter				Q	Net (Ont Rt	Dpm	Wo E	3lk Dpm-Bil	Vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILco		MDC StdDvMc	dC/LcC
	04/13/06	U-232	R	66.9902 (5.0479			3.2423 (1.274		9.305 (0.46		9.305587) (0.460187)	(0	1.00 (027066)		93%					
	04/13/06	U-234	R	-0.0089 (0.0089			-3.9999 (3.9999		-0.00 (0.00			(0	1.00 (02 7 066.		93%		0.448426 0.073287			
	04/13/06	U-235	R	0.00E00 (0.1364			0.0000		0.00E (0.01		0.00E00) (0.018955)	(0	1.00 (027066.		93%		0.301939	3		
	04/13/06	U-238	В		07		-3.9999 (3.9999	95E-04 9E-04)	-0.00 (0.00		· -	(0	1.00 (027066.		93%		0.448426 0.073287			
0	- (1s Uncertainitie	s), Q - Qualifie	r, U Re	sult is Les	s Than Lc =	1.645	5'TPU				Page 9	<u> </u>				opromote annimited the powers to the territory	Rec	Ont:16	RADCALC v4.	8.18
Sr-8	- instrument Deter 9 Counts are Deri	ction Level in C ved from the C	one Uni ombinat	its, MLcC tion of Eac	- Method D h Sr-89/90	ecisio: and Y-	n Level -90 Cou	in Conc U nt, All Re	Inits, Mi sult Digi	DC-M ts Ma	finimum Detectable y Not be Significan	Concentrations ts, Date/Time	en e - mm/dd/	'yy hh:mm	ı, 24hr Time				STL Richland	

i	Batch Nbr: 60	60317			Alpha	a Spe	c, U	lsc	by ALP	, Ca	alcula	ated F	Result	S		4/13	/2006 9:42:	51 PN
q	Status Method	Matrix	Protocol Equa	tion Set V	Vrk Ord	Units/M	atrix C	C/BI	B Sa/On Date	AnalysisDa	ate/PptWt	Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy	Vol Final/Cou	unt Vo
	Calc SR RA-LAB BLANK	AIR	*STLE Alpiso	0WoBS H0E J6C010000-317		PCI/SA AIR	В	02	2/05/06 06:00	04/13/06	19:02			UITC153	1 340 Alq	1.00 S 1.00 S		
Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
)	04/13/06 17:23	U-232	676 / 199.633333	3 3 1000.1	ALP87	ED	Y Y	N	3.4106E-01 (1.023E-02)		N	100%	N	and the second second second points of	1.0000E+00 (0.000E+00)		1.0000E+00	
	04/13/06 17:23	U-234	0 199.633333	0 3 1000.1	ALP87	ED	N Y	N	3.4106E-01 (1.023E-02)		N	98% 9%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/13/06 17:23	U-235	0 1 99 .633333	2 3 1000.1	ALP87	ED	N Y	N	3.4106E-01 (1.023E-02)		N	98% 9%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
3	04/13/06 17:23	3 U-238	0 199.633333	0 3 1000.1	ALP87	ED	N Y	N	3.4106E-01 (1.023E-02)		N	98% 9%	N		1.0000E+00 (0.000E+00)		1,0000E+00	
S	q Calc Date	Parameter	Avg Sa	Act Q	Net	Cnt Rt	Dpm	Wo E	Bik Dpm-Bi	k Vol	Used		Yield,EnFc	t Chem Yld,	EFetU IDC/ILe	BikLcC/N	IDC StdDvMd	iC/Lc(
_	04/13/06	U-232	R 4.4682 (0.321			21E+00 25E-01)	9.919 (0.484		9.919567 (0.48415)	(0	1.00 .017321		98%					
	04/13/06	U-234	R 0.00E		4 0.0000 (0.000	00E+00 00E+00)	0.00E (0.018		0.00 E0 0) (0.018312) (0	1.00 (01 7321 .		98%		0.018251			
	04/13/06	U-235	R -0.002		4 -1.999	180E-03 11E-03)	-0.005 (0.004		-		1.00		98%		0.038039)		
	04/13/06	U-238	(0.001 R 0.00E	00 U	4 0.000	,	0.00E (0.018	00	0.00E00	,	.017321 1.00 .017321) Sa	98%		0.0099 0.018251	i		
Sq	Status Method	Matrix	(0.008 Protocol Equa		Wrk Ord	<u>, , , , , , , , , , , , , , , , , , , </u>	سرسا حد برسود		B Sa/On Date	. (-			/Sep2 Date	QC/Trace	r Vial Mult/Ent\	/ld Total/Analy	Vol Final/Co	unt V
	Caic SR TRA-LAB CHECK	AIR	*STLE Alpis	oWoBS H0 0		PCI/SA AIR	\ S	02	2/05/06 06:00	04/13/06	19:02	Bakalan dan samena		UISF044 UISF044	•	1.00 S		
Sq	Cnt Date	Paramete	r Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VoiAd	j Decay	Ab
)	04/13/06 17:23	U-232	486 / 199.45	72 2500.0833	ALP85	ED	Y Y	N	2.5840E-01 (7.752E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	ATTACK CONTRACTOR AND
	04/13/06 17:23	3 U-234	119 , 199.45	7 2500.0833	ALP85	ED	N Y	N	2.5840E-01 (7.752E-03)		N	94% 9%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
2	04/13/06 17:23	3 U-235	2 199.45	2 2500.0833	ALP85	ED	N Y	N	2.5840E-01 (7.752E-03)		N	94% 9%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/13/06 17:23	3 U-238	92 199.45	1 2500.0833	ALP85	ED	N Y	N	2.5840E-01 (7.752E-03)		N	94% 9%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
() ()	- (1s Uncertainiti	es), Q - Qualific	er, U Result is L	ess Than Lc = 1	.645 * TPU)		····	Page				ally Market and the control of the c	***************************************	Rec	*	RADCALC v4.	8.18
Sr-8	- instrument Det 9 Counts are Det	rived from the C	cond units, MLC combination of E	to - Method Dec ach Sr-89/90 ar	dision Leve d Y-90 Co	unt, All Re	nıts, Mi sult Digi	ts Ma	finimum Detectabl ıy Not be Significal	e Concentrationts, Date/Tim	on e • mm/dd	l∕yy hh:mn	n, 24hr Time	:		S	STL Richland	

Ba	atch Nbr: 60	60317			/	Alpha Spe	ec, Ulso t	y ALP	, Calculated	Results	3	No. 100 - 100 May No. 100 Aug 1994 - 100 May 1994 -	4/13/20	06 9:42:51 PM
Sq	Caic Date	Parameter	Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EF	ctu IDC/ILcC	BikLcC/MDC	StdDvMdC/LcC
	04/13/06	U-232	R	4.197554 (0.319927)		2.40790E+00 (1.1058E-01)	9.31858 (0.511174)	9.31858 (0.511174)	1.00 Sa (0.017321)	94%			·	<u>-</u>
	04/13/06	U-234	R	1.103865 (0.158179)		5.93841E-01 (5.4704E-02)	2.450582 (0.326339)	2.450582 (0.326339)	1.00 Sa (0.017321)	94%	110%	0.057643 0.016202		
	04/13/06	U-235	R	0.017153 (0.013356)	U4	9.22760E-03 (7.1131E-03)	0.038079 (0.029581)	0.038079 (0.029581)	1.00 Sa (0.017321)	94%	38%	0.042568 0.008661		
	04/13/06	U-238	R	0.856688 (0.129745)		4.60869E-01 (4.8092E-02)	1.90185 (0.269881)	1.90185 (0.269881)	1.00 Sa (0.017321)	94%	82%	0.037498 0.006124		

RecCnt:17

RADCALC v4.8.18

STL Richland

^{() - (1}s Uncertaintties), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 11

IDC - instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

S	SEVERN	CTI
H	TRENT	511
abla		

Form No: RC-011, 7/02, Rev 8

URANIUM ISOTOPIC COUNTING REQUEST 2035

Date:____

R. Technician		Counting Time Sample	20		_Minutes	SOP's Operating:	RICHRDOOS
ate Counted	1/13/04	Background <u>Se</u>	ze Alpha Rec	Report	2/5/06	Review: 6060317	RICHRD001
	U-232 (5320 KeV) Tracer	Т	OTAL COUN	NTS			
		U-238 (4196 KeV)	U-2 35 (4396 KeV)	U-2 34 (4776 KeV)			
WorkOrder #				 	Det #	Comments/Edits	
HX8/NIAG	See Counting Roo	m Printout for R	OI informatio	n	1		
HX8/Q1AG	See Counting Roo	m Printout for R	OI informatio	n	2		···
HX81 RIAG	See Counting Roo	m Printout for R	OI informatio	en .	3		
HX8/+1A4	See Counting Roo	om Printout for R	OI information	on	4		
	See Counting Roo	om Printout for R	OI informati	p n	5		
HX81 VIAG HX81 WIAG	See Counting Roo	om Printout for P	OI informati	on	7		
HX81 X/AG	See Counting Room	om Printout for R	CI informati	on	8		
HX8111AG	See Counting Roo	om Printout for F	ROI informati	on	9		
7	See Counting Ro	om Printout for F	ROI informati	on			
Comments:							

Approved by:

URANIUM ISOTOPIC COUNTING REQUEST

	<u> </u>	Counting Time Sample	20	0	Minutes		50P's Operating:	RICHRD008
Date Counted	1/13/06	Background <u>S</u>	ee Alpha Re	gions Report	2/5/200	6 (Review: 060317	RICHRD0016
	U-232 (5320 KeV) Tracer	Т	OTAL COU	NTS				
		U-238 (4196 KeV)	U-235 (4396 KeV)	U-234 (4776 KeV)			· .	
WorkOrder #					Det #	Comment	s/Edits	
H×8121A4	See Counting Roo	om Printout for R	OI informati	on	10			
HX8121AG HX8131AG	See Counting Ro	om Printout for R	OI informati	on	(/		· · · · · · · · · · · · · · · · · · ·	
HX8141AG	See Counting Ro	om Printout for R	ROI informati	on	12			
	See Counting Ro	om Printout for R	ROI informati	on	69			
HX8151AG HX8161AG	See Counting Ro	om Printout for F	ROI informati	on	7/	EDIT		
HX817146	See Counting Ro	om Printout for F	ROI informati	on	83			
HX8181A-G	See Counting Ro	om Printout for F	ROI informat	оп	84		···	
HOEHTIAA	See Counting Ro	om Printout for I	ROI informat	ion	87			
HOEHTIAC	See Counting Ro	oom Printaut for I	ROI informat	ion	85			
Comments:								
<u></u>								= = :

Form No: RC-011, 7/02, Rev 8

Approved by:

Date:____

URANIUM ISOTOPIC STANDARDS AND TRACEABILITY

5/26/2006 12:06:44 PM

Standard Material Fractions (Vials)

Vial Prep: 5/25/05 to 5/27/06.SMFractionIdentifier Between UITC15325 and UITC15340, Order by SMIdentifier, ConstituentCode, SMFractionIdentifier

Vial Identifier	Constituent	Prep Activity/	Concentration		Std Wt U	sed	Prep,Decay	yed To Date	Prep by Std Decaye	d Activity/Conce	intration
	Parent Sta	ndard: U2320	1A12A9	Ref:	12/16/200)2	5.0587E+(01 ±3.696	E+00 DPM/G		
UITC15325	U-232	1.0124E+01	± 7.397E-01	DPM	0.2067	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	±3.579E+00	DPM/G
UITC15326	U-232	1,0051E+01	± 7.344E-01	DPM	0.2052	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	± 3.579E+00	DPM/G
UITC15327	U-232	1.0115E+01	± 7.390E-01	DPM	0.2065	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	± 3.579E+00	DPM/G
UITC15328	U-232	1.0071E+01	± 7.358E-01	DPM	0.2056	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	± 3.579E+00	DPM/G
UITC15329	U-232	1.0041E+01	± 7.337E-01	DPM	0.205	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	± 3.579E+00	DPM/G
UITC15330	U-232	1.0056E+01	± 7.347E-01	DPM	0.2053	g	3/20/2006	3/20/2006	Armstron 4.8981E+01	±3.579E+00	DPM/G
UITC15331	U-232	1.0110E+01	<u>+</u> 7.387E-01	DPM	0.2064	g	3/20/2006	3/20/2006	Armstron 4,8981E+01	± 3.579E+00	DPM/G
UITC15332	U-232	1.0046E+01	± 7.340E-01	DPM	0.2051	g	3/20/2006	3/20/2006	Armstron 4,8981E+01	±3.579E+00	DPM/G
UITC15333	U-232	1.0053E+01	± 7.345E-01	DPM	0.2053	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15334	U-232	1.0034E+01	± 7.331E-01	DPM	0.2049	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15335	U-232	1.0073E+01	± 7.360E-01	DPM	0.2057	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15336	U-232	1.0087E+01	± 7.370E-01	DPM	0.206	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15337	U-232	1.0078E+01	± 7.363E-01	DPM	0.2058	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15338	U-232	1.0073E+01	<u>+</u> 7.36ÓE-01	DPM	0.2057	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15339	U-232	1.0034E+01	<u>+</u> 7.331E-01	DPM	0.2049	g	3/30/2006	3/30/2006	Armstron 4.8968E+01	±3.578E+00	DPM/G
UITC15340	U-232	1.0102E+01	± 7.381E-01	DPM	0.2063	g	3/30/2006	3/30/2006	Armstron 4,8968E+01	±3.578E+00	DPM/G

 $1.0072E+001 \pm 2.923E-002$ (16)

0.290% 1.0034E+001 , 1.0124E+001

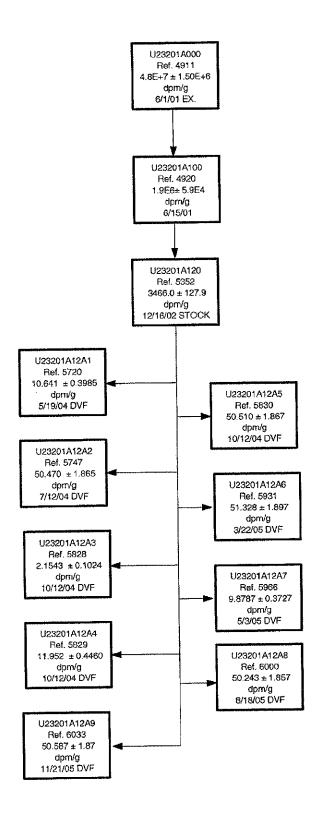
STL Richland, SMFractions v4.8.12

* - Isotope is an impurity

l Identifier		Pren Activity/Concentration	Std Wt Used	Prep, Decayed To Date	Prep by Std Decayed Activity/Cond	entration
		Prep Activity/Concentration and ard: U23201A12A9	Ref: 12/16/2002	5.0587E+01 ± 3.696		
F0442	U-232	9.9443E+00 ± 7.266E-01			Armstron 4.8987E+01 ±3.579E+00	DPM/
	0 202	9.9443E+000 ± 9.944E+00		9.9443E+000 , 9.944		
		0.0440E4000 <u>4</u> 0.011E100	, , ,	•		
		•				

* - Isotope is an Impurity

U23201A12A



U23201A

ISOTOPE DILUTION RECORD

1) Prepared by <u>TDA</u>	2) Date Prepared	11/21/2005
3) Source Identification Number / Ref. Nu.	mber <u>U23201A120</u>	5352
4) Source Activity (dpm ± dpm/g)	3.3670E+03 ±	1.242E+02
5) Percent error of Source Activity	3.691 %	
6) Weight of Source Material used (g)	3.3055	
7) (% Error) of Weight of Source Material used	0.1452 %	
8) Diluent	2M HNO3, P-05-00468	
9) Total Weight of the Dilution (g)	220.01	
10) (% Error) of Total Weight of the Dilution	0.1364 %	
11) Specific Activity of Diluted Solution of	lpm/g <u>5.0587E+01</u> ±	1.870E+00
12) Total Uncertainty	3.696 %	
13) Dilution Identification Number / Ref. I	Number <u>U23201A12A9</u>	6033
14) Calibration Reference Date	11/21/2005	
15) Isotope Inventory File update by/date	TDA	11/21/2005
16) Reviewed by/date	handed on the state of the stat	
17) Location QC LAB	18) Exhausted	
**************************************		,
7) % Error of Wt. used = (0.0048 / Weight of Source I		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dil	ution * 100)	
11) Specific Activity = Source Activity * Wt. of Source	Material used / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source	Activity ^2 + % error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

U23201A

ISOTOPE DILUTION RECORD

1) Prepared by	RM	2) Date Prepared		8/18/2005
3) Source Identificat	ion Number / Ref. Number	U23201A120		5352
4) Source Activity (dpm ± c	dpm/g)	3.3750E+03	±	1.246E+02
5) Percent error of Source	Activity	3.691	%	
6) Weight of Source Mater	ial used (g)	3.2793		
7) (% Error) of Weight of S	ource Material used	0.1464	%	
8) Diluent		2M HNO3. P-05-00352		
9) Total Weight of the Dilu	tion (g)	220.28		
10) (% Error) of Total Weig	ght of the Dilution	0.1362	%	
11) Specific Activity	of Diluted Solution dpm/g	5.0243E+01	#	1.857E+00
12) Total Uncertainty		3.696	%	
13) Dilution Identific	ation Number / Ref. Number	U23201A12A8		6000
14) Calibration Reference	Date	8/18/2005		
15) Isotope Inventory File	update by/date	DRM		8/18/2005
16) Reviewed by/date				ANTENNESS CONTROL CONT
17) Location QC	CLAB	18) Exhausted		***************************************
************		*******	****	
7) % Error of Wt. used = (0	0.0048 / Weight of Source Material used			
10) % error of Dilution Wt.	= (0.3 / Total Weight of Dilution * 100)			
11) Specific Activity = Soul	rce Activity * Wt. of Source Material used	I / Total Wt. of the Dilution		
12) % Total Uncertainty =	(% error of Source Activity ^2 + 9	% error of Wt. Used^2 + %	error of D	Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

U23201A.XLS

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	3/22/2005
3) Source Identification Number / Ref. Number	U23201A120	5352
4) Source Activity (dpm ± dpm/g)	3.3892E+03 ±	1.251E+02
5) Percent error of Source Activity	3.691 %	
6) Weight of Source Material used (g)	3.5826	
7) (% Error) of Weight of Source Material used	0.1340 %	
8) Diluent	2M HN03-P0500135	
9) Total Weight of the Dilution (g)	236.56	
10) (% Error) of Total Weight of the Dilution	0.1268 %	
11) Specific Activity of Diluted Solution dpm/g		1.897E+00
12) Total Uncertainty	3.696 %	
13) Dilution Identification Number / Ref. Number	U23201A12A6	5931
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	U23201A12A6 3/22/2005	5931
		5931 3/22/2005
14) Calibration Reference Date	3/22/2005	
14) Calibration Reference Date15) Isotope Inventory File update by/date	3/22/2005 W.G	3/22/2005
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	3/22/2005 W.G sew	3/22/2005
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	3/22/2005 W.G sew	3/22/2005
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1129 	3/22/2005 W.G sew 18) Exhausted	3/22/2005
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1129 CALCULATIONS	3/22/2005 W.G sew 18) Exhausted	3/22/2005
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1129 CALCULATIONS 7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 1.0048 / Weight of Source Materi	3/22/2005 W.G sew 18) Exhausted	3/22/2005

Form: <u>CC-006, 7/15/99, Rev 3</u>

U23201A.XLS

ISOTOPE DILUTION RECORD

1) Prepared by W.G		2) Date Prepared		7/12/2004
3) Source Identification	n Number / Ref. Number	U23201A120		5352
4) Source Activity (dpm ± dpn	n/g)	3.4125E+03	±.	1.259E+02
5) Percent error of Source Ac	tivity	3.691	%	
6) Weight of Source Material	used (g)	3.7137		
7) (% Error) of Weight of Sou	rce Material used	0.1293	%	
8) Diluent		2M HN03-P0400281		
9) Total Weight of the Dilution	(g)	251.10		
.10) (% Error) of Total Weight	of the Dilution	0.1195	%	
11) Specific Activity of	Diluted Solution dpm/g	5.0470E+01	±	1.865E+00
12) Total Uncertainty		3.695	%	
13) Dilution Identificati	on Number / Ref. Number	U23201A12A2		5747
 Calibration Reference Date 	re ,	7/12/2004		
14) Calibration Reference Date15) Isotope Inventory File upo		7/12/2004 W.G		7/12/2004
,				7/12/2004
15) Isotope Inventory File upd	ate by/date			7/12/2004
15) Isotope Inventory File upo16) Reviewed by/date	ate by/date	W.G	******************************	7/12/2004
15) Isotope Inventory File upo16) Reviewed by/date	ate by/date	W.G	*****	7/12/2004
15) Isotope Inventory File upon16) Reviewed by/date17) Location QCLAB/ST\	late by/date NT1016	W.G 18) Exhausted	**************************************	7/12/2004
 15) Isotope Inventory File upon 16) Reviewed by/date 17) Location QCLAB/STV 7) % Error of Wt. used = (0.00) 	NT1016 CALCULATIONS	W.G 18) Exhausted	****	7/12/2004
 15) Isotope Inventory File upon 16) Reviewed by/date 17) Location QCLAB/STV 7) % Error of Wt. used = (0.00 10) % error of Dilution Wt. = (0.00 	NT1016 CALCULATIONS 48 / Weight of Source Material used *	W.G 18) Exhausted	****	7/12/2004

Form: <u>CC-006, 7/15/99, Rev</u> 3

U23201a.xls

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared		12/16/2002
3) Source Identification Number / Ref. Number	U23201A100		4920
4) Source Activity (dpm ± dpm/g)	1.8680E+06	±	5.810E+04
5) Percent error of Source Activity	3.110 %		
6) Weight of Source Material used (g)	0.2431		
7) (% Error) of Weight of Source Material used	1.9745 %		
8) Diluent	2M HN03-P0200579		
9) Total Weight of the Dilution (g)	131.02		
10) (% Error) of Total Weight of the Dilution	0.2290 %		
11) Specific Activity of Diluted Solution dpm/g	3.4660E+03	± .	1.279E+02
12) Total Uncertainty	3.691 %		
13) Dilution Identification Number / Ref. Number	U23201A120		5352
14) Calibration Reference Date	12/16/2002		
15) Isotope Inventory File update by/date	W.G	-	12/16/2002
16) Reviewed by/date	SEW	.=	12/19/2002
17) Location QCLAB/STWT0710	18) Exhausted	-	
	*******	****	•
CALCULATIONS			
7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 10	0)		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 10 10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)	0)		
- 			

Form: CC-006, 7/15/99, Rev 3

U23201a.xls

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2). Date Prepared	6/15/2001
3) Source Identification Number / Ref. Number	U23201A000	4911
4) Source Activity (dpm ± dpm/g)	4.8289E+07 ±	1.497E+06
5) Percent error of Source Activity	3.1 %	
6) Weight of Source Material used (g)	5.1444	
7) (% Error) of Weight of Source Material used	0.0933 %	
8) Diluent	2M HNO3-P0100281	
9) Total Weight of the Dilution (g)	131	
10) (% Error) of Total Weight of the Dilution	0.2290 %	
11) Specific Activity of Diluted Solution dpm/g	1.8963E+06 ±	5.897E+04
12) Total Uncertainty	3.110 %	
13) Dilution Identification Number / Ref. Number	U23201A100	4920
14) Calibration Reference Date	6/15/2001	
15) Isotope Inventory File update by/date	W.G	6/15/2001
16) Reviewed by/date	rross	6/20/2001
17) Location QCLABSTWT0413	18) Exhausted	
***************************************	************	
CALCULATIONS		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 10	00)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used / To	otal Wt, of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + % er	ror of Wt. Used^2 + % error of D	ilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

ISOTOPE RECORD FORM

			·····
1) Isotope	U-232	2) Reference Numb	4911
3) Half Life_	69.9 yrs	4) Storage Location	STDLAB
5) Source la	lentification Nu	ı U23201)	4 <i>000</i>
******	*******	***********	}
	CAL	IBRATION DATA	
6) Activity as	Received Units	21.76 u	Ci/g
7) Overall Un	certainty Percer	3.1%	,
8) Reference	Date / Time	6/1/01 12:00 PST	Г (12:00 РМ)
9) Activity d _f	om/g	4.8307E+07 ± 1.49	975E+06 dpm
10) Volume or	Mass (ml/g)	5.1845	5g
11) Calibrated	by	IPL	***************************************
12) Certificate	Solution Numbe	763-34	-3
*******	*****	************	} ; ************************************
	SU	JRVEY DATA	
13) Date Rece	ived	6/4	1/2001
14) Surveyed L	by		<i>V.G</i>
15) Survey Red	ading (Beta/Gar	тта) срі	<1k
16) Survey Rea	ading (Alpha) cp	om <10	10 cpm
*********	******	******	 ***************
17) Activity Col	nversi <u>on</u>		
21.76 uCi/ a x	(2.22E+6dpm/u(Ci= 4.831E+7 ± 1.498E+	
18) Remarks			
Wilden			
19) Isotope File	Updated by	6/4/01 W	<u>'.G</u>
20) QC Approv	ed _	rross 6/20/01	

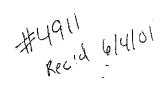


24937 Avenue Tibbitts Valencia, California 91355

Tel 661-309-1010

An Eckert & Ziegler Company

Fax 661-257-8303



CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Radionuclide:

Half-life:

U-232

 $68.9 \pm 1.0 \text{ years}$

Catalog No.: 763-34-3

Source No.:

7332

Customer: P.O. No.:

SEVERN TRENT LABORATORIES, INC.

4174

1017921-000 OP

Reference Date:

Contained Radioactivity:

1-Jun-01

112.8

12:00 PST

иСi

kBq

Physical Description:

A. Mass of solution:

5.18455 g in 5 mL flame-sealed ampoule

B. Chemical form:

UO2Cl2 in 2M HCl

C. Carrier content:

None

D. Density:

1.033 g/mL @ 20°C.

Radioimpurities:

None detected (Th-228 separated on 31 Jul 99; activity on 30 May 01 = 54.76 µCi)

Radionuclide Concentration:

21.76

μCi/q.

805.1

kBq/g

Method of Calibration:

This source was assayed using gamma ray spectrometry for Th-228 activity. The U-232 activity is calculated based on the amount of Th-228 that has grown in since 31 Jul 99.

Peak energy used for integration:

583.2 keV

Branching ratio used:

0.306 gammas per decay

Uncertainty of Measurement:

A. Type A (random) uncertainty:

± 0.8 %

B. Type B (systematic) uncertainty:

± 3.0 %

C. Uncertainty in aliquot weighing:

0.0 %

D. Total uncertainty at the 99% confidence level:

3.1 %

Notes:

- See reverse side for leak test(s) performed on this source.
- IPL participates in a NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).
- Nuclear data was taken from "Table of Radioactive Isotopes", edited by Virginia Shirley, 1986.
- This solution has a working life of 5 years.

alsem 31-May-01 DateBigned

IPL Ref. No.:

763-34

ISO 9001 CERTIFIED

Parent Standard: U3O886A1362 Ref: 3/22/2005 3.5107E+01 ± 1.950E-01 UG/G UISF0442 U 3.0227E+00 ± 1.751E-02 UG 0.0861 g 3/16/2006 3/16/2006 Armstron 3.5107E+01 ± 1.950E-01 3.0227E+000 ± 3.0237E+000 (1) 3.0227E+000 . 3.0227E+000	Constituent Prep Activity/Concentration Std Wt Used	Prep,Decayed To Date Prep by Std Decayed Activity/Concentration
UISF0442 0 3.02272+00 ± 1.7312-02 00 3.0001 9 3.101000	Parent Standard: U3O886A1362 Ref: 3/22/2005	3.5107E+01 ± 1.950E-01 UG/G
3.0227E±000 ± 3.023E±000 (1) 3.0227E±000 , 3.0227E±000	U 3.0227E+00 ± 1.751E-02 UG 0.0861 g	3/16/2006 3/16/2006 Armstron 3.5107E+01 ±1.950E-01 UG/
3.0227 L7000 T 0.02.0C 1.000 \ 1)	3.0227E+000 ± 3.023E+000 (1)	3.0227E+000 , 3.0227E+000
	_	Parent Standard: U3O886A1362 Ref: 3/22/2005 U 3.0227E+00 ± 1.751E-02 UG 0.0861 g

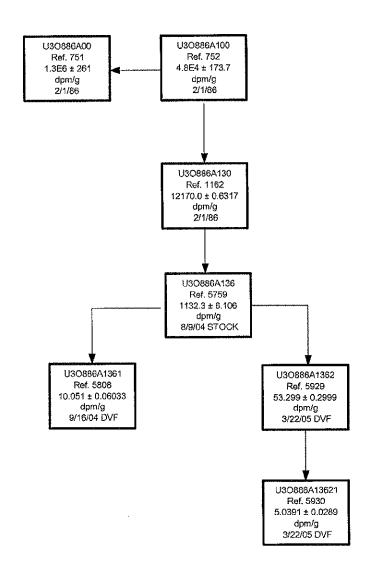
STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

Page 2

Record Count: 3

ial Identifier	Constituent	Prep A	ctivity/0	Concentration		Std Wt Us	eu	1 (6),1260	ayeu iu i		, op 2) - 0.	Deouye	d Activity/Cond	ermauon
	Parent Sta	ndard:	U3O88	6A1362	Ref:	3/22/2005		5.3995E-	+01 ±2	2.999E-(11 DPM/	G		
ISF0442	UISO	4.64901	E+00	± 2.693E-02	DPM	0.0861	g	3/16/2006	3/16/20	006 A	mstron 5.39	995E+01	± 2.999E-01	DPM/(
		4.649	0E+000	± 4,649E+0	00 (1)			4.6490E	+000 , 4	1.6490E	+000			
									,					
CTI Dioblem	d, SMFractions	v4.8.12				Page 3						Reco	ord Count: 3	

U3088A136 Link



U30886A131.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/16/2004
3) Source Identification Number / Ref. Number	U3O886A136	5759
4) Source Activity (dpm ± dpm/g)	1.1323E+03 ±	6.106E+00
5) Source Activity (ug ± ug/g)	7.3622E+02	3.9701E+00
6) Percent error of Source Activity	0.539 %	
7) Weight of Source Material used (g)	2.0783	
8) (% Error) of Weight of Source Material used	0.2310 %	
9) Diluent	2M HNO3-P0400528	
10) Total Weight of the Dilution (g)	234.14	
11) (% Error) of Total Weight of the Dilution	0.1281 %	
12) Specific Activity of Diluted Solution dpm/g	1.0051E+01 ±	6.033E-02
13) Specific Activity of Diluted Solution ug/g	6.5349E+00 ±	3.922E-02
14) Total Uncertainty	0.600 %	
15) Dilution Identification Number / Ref. Number	U30886A1361	5808
16) Calibration Reference Date	9/16/2004	
17) Isotope Inventory File update by/date	W.G	9/16/2004
18) Reviewed by/date	sew	9/21/2004
18) Reviewed by/date19) Location QCLB/STWT1049	sew 20) Exhausted	9/21/2004
19) Location QCLB/STWT1049	4,-1,	9/21/2004
19) Location QCLB/STWT1049	20) Exhausted	9/21/2004
19) Location QCLB/STWT1049 ***********************************	20) Exhausted	9/21/2004
19) Location QCLB/STWT1049 ***********************************	20) Exhausted	9/21/2004

Form: CC-006a, 7/15/99, Rev 3

U30886A131.XLW

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	8/9/2004
3) Source Identification Number / Ref. Number	U3O886A130	1162
4) Source Activity (dpm ± dpm/g)	1.2170E+04 ±	6.317E-01
5) Source Activity (ug ± ug/g)	7.9129E+03	4.1073E-01
6) Percent error of Source Activity	%	
7) Weight of Source Material used (g)	19.3584	
8) (% Error) of Weight of Source Material used	0.0248 %	
9) Diluent	2M HNO3-P0400528	
10) Total Weight of the Dilution (g)	208.06	
11) (% Error) of Total Weight of the Dilution	0.1442 %	
12) Specific Activity of Diluted Solution dpm/g	1.1323E+03 ±	6.106E+00
13) Specific Activity of Diluted Solution ug/g		3.970E+00
14) Total Uncertainty	0.539 %	
15) Dilution Identification Number / Ref. Number	U30886A136	5759
15) Dilution Identification Number / Ref. Number16) Calibration Reference Date	U30886A136 8/9/2004	5759
,		5759 8/9/2004
16) Calibration Reference Date	8/9/2004	
16) Calibration Reference Date17) Isotope Inventory File update by/date	8/9/2004 W.G	8/9/2004
 16) Calibration Reference Date 17) Isotope Inventory File update by/date 18) Reviewed by/date 19) Location QCLB/STWT1026 	8/9/2004 W.G sew	8/9/2004
 16) Calibration Reference Date 17) Isotope Inventory File update by/date 18) Reviewed by/date 19) Location QCLB/STWT1026 	8/9/2004 W.G sew 20) Exhausted	8/9/2004
 16) Calibration Reference Date 17) Isotope Inventory File update by/date 18) Reviewed by/date 19) Location QCLB/STWT1026 	8/9/2004 W.G sew 20) Exhausted	8/9/2004
16) Calibration Reference Date 17) Isotope Inventory File update by/date 18) Reviewed by/date 19) Location QCLB/STWT1026 ***********************************	8/9/2004 W.G sew 20) Exhausted	8/9/2004
16) Calibration Reference Date 17) Isotope Inventory File update by/date 18) Reviewed by/date 19) Location QCLB/STWT1026 ***********************************	8/9/2004 W.G sew 20) Exhausted	8/9/2004

Form: CC-006a, 7/15/99, Rev 3

U30886A131.XLW

ISOTOPE DILUTION RECORD

1) Prepared by S.S	2) Date Prepared			9/14/1987
3) Source Identification Number / Ref. Numl	U3O886A100			752
4) Source Activity (dpm ± dpm/g)	4.7985E+04		±	1.731E+02
5) Source Activity (ug ± ug/g)	3.1200E+04			1.1255E+02
6) Percent error of Source Activity	0.361	_%		
7) Weight of Source Material used (g)	20.4345			
8) (% Error) of Weight of Source Material used	0.0005	_%		
9) Diluent	2M HNO3	_		
10) Total Weight of the Dilution (g)	80.57	_		
11) (% Error) of Total Weight of the Dilution	0.1386	_%		
12) Specific Activity of Diluted Solution dpr	1.2170E+04		±	6.317E+01
13) Specific Activity of Diluted Solution ug/	7.9130E+03	-	±	4.107E+01
14) Total Uncertainty	0.519	_%		
15) Dilution Identification Number / Ref. Nu	U30886A130			1162
16) Calibration Reference Date	2/1/1986			
17) Isotope Inventory File update by/date	S.S.	_		9/14/1987
18) Reviewed by/date	D.M,	•••		6/14/1994
19) Location PF-9	20) Exhausted			12/13/1990
**************************************	.ATIONS	****	*****	**********
7) % Error of Wt. used = (0.0048 / Weight of Source Mat				
10) % error of Dílution Wt. = (0.3 / Total Weight of Dílutio	•			
11) Specific Activity = Source Activity * Wt. of Source Ma	•	Vt. of	the Di	lution
				· % error of Dilution Wt.)

Form: CC-006, 5/5/94, Rev 2

U3O886A117.xls

ISOTOPE DILUTION RECORD

1) Prepared by	C.S.	2) Date Prepared		3/24/86
3) Source Identii	fication Number / Ref. Number	U3O886A000		751
4) Source Activity (dp	om ± dpm/g)	1.3045E+06	_ ±	2.610E+02
5) Source Activity (ug	1 ± ug/g)	8.4818E+05	-	1.6970E+02
6) Percent error of Sc	ource Activity	0.02	%	
7) Weight of Source !	Material used (g)	3.3411	- 	
8) (% Error) of Weigh	t of Source Material used	0.0206	_%	
9) Diluent		8M HNO3		
10) Total Weight of th	e Dilution (g)	90.83	-	
11) (% Error) of Total	Weight of the Dilution	0.1091	_%	
12) Specific Activ	vity of Diluted Solution dpm/g	4.7985E+04	±	1.731E+02
13) Specific Activ	vity of Diluted Solution ug/g	3.1200E+04	_ ±	1.125E+02
14) Total Uncertainty		0.361	_%	
,				
	tification Number / Ref. Number	U3O886A100		752
		U3O886A100 2/1/86		752
15) Dilution Ident	ence Date		·	752 5/7/86
15) Dilution Ident 16) Calibration Refere	ence Date File update by/date	2/1/86	-	
15) Dilution Ident16) Calibration Refere17) Isotope Inventory	ence Date File update by/date	2/1/86 D.D,	-	5/7/86
15) Dilution Ident16) Calibration Refere17) Isotope Inventory18) Reviewed by/date	ence Date File update by/date	2/1/86 D.D. D.M. 20) Exhausted	-	5/7/86 6/15/94 11/8/93
15) Dilution Identi 16) Calibration Refere 17) Isotope Inventory 18) Reviewed by/date 19) Location	ence Date File update by/date PF-8	2/1/86 D.D. D.M. 20) Exhausted	-	5/7/86 6/15/94 11/8/93
15) Dilution Identi 16) Calibration Refere 17) Isotope Inventory 18) Reviewed by/date 19) Location 7) % Error of Wt. used	ence Date File update by/date PF-8 CALCULATIONS	2/1/86 D.D. D.M. 20) Exhausted	-	5/7/86 6/15/94 11/8/93
15) Dilution Identi 16) Calibration Refere 17) Isotope Inventory 18) Reviewed by/date 19) Location 7) % Error of Wt. used 10) % error of Dilution	PF-8 CALCULATIONS = (0.0048 / Weight of Source Material used	2/1/86 D.D. D.M. 20) Exhausted		5/7/86 6/15/94 11/8/93
15) Dilution Identi 16) Calibration Refere 17) Isotope Inventory 18) Reviewed by/date 19) Location 7) % Error of Wt. used 10) % error of Dilution	PF-8 CALCULATIONS = (0.0048 / Weight of Source Material used Wt. = (0.3 / Total Weight of Dilution * 100) ^ Source Activity * Wt. of Source Material used	2/1/86 D.D. D.M. 20) Exhausted * 100) ^2 2 d / Total Wt. of the Dilu	tion	5/7/86 6/15/94 11/8/93

_ _ 808

Page 1

CC-006, 5/5/94, Rev 2

Form:

ISOTOPE RECORD FORM

1) IsotopeU-NAT	2) Reference Number	#75 1		
3) Haif Life <u>Negligable Decay</u>	4) Storage Location	STD LAB		
5) Source Identification Number_	U3O886A000			
**************************************	LIBRATION DATA	 		
6) Activity as Received Units1.304E+06 dpm/g				
7) Overall Uncertainty Percent				
8) Reference Date / Time				
9) Activity dpm/g				
40000 april 40000				
11) Calibrated by	10) Volume or Mass (ml/g) 10 g			
•	NBS			
12) Certificate Solution Number	SRM 950B L	Jranium Oxide		
s	URVEY DATA			
13) Date Received 2/1/86				
14) Surveyed by		D.D. & A.V.R.		
15) Survey Reading (Beta/Gamma) cp	om100,00	100,000 cpm at Contact		
16) Survey Reading (Alpha) cpm	E	Background		
***********************	西南南南南南南南南南南南南南南南南南南南南南南南南南南			
17) Activity Conversion (0.8481g_U-nat/g_U3O8) (0.99968) (1.538E+06 dpm/g_U-nat) =				
1.304E+06 ± 2.61E+02 (0.02%) dpm/g U3O8				
18) Remarks <u>MW U3O8 = (3 * 238.0289) + (8 * 15.9994) = 842.0819 g / mole U3O8</u>				
Material was ignited at 800°C in a crucible for 1 hr and cooled to room temperature in a sealed dessicator.				
19) Isotope File Updated by				
20) QC Approved D.B.				

Form No.: CC-008, 3/95, Rev. 2

U.S. Department of Commissions Assessed St. Commissions

Manager Surveyor

Faiional Bureau of Siandards Certificate

751

Standard Reference Material 950b

Uranium Oxide (U3O3)

(In Cooperation with the Department of Energy, New Brunswick Laboratory, Argonne, Illinois)

This material comists of normal transform in the form of paint, UpCs. It is interpret to provide a reference material of known transfer common

CERTED VALUE

Uramum Oxide (U:Ox). . . . 99,968 ± 3,000 perumt

The stated uncommunity of m3.320 persons associated with the metallicit value is the linear sum of 2.0076 persons which is the linear of the mandom error of the assay measurements at the 39 persons confidence level (2.307 Sec where Sec is the mandard error of the mean with a = 24), and 0.312 persons, the estimated upper limit of minerical able systematic errors including material variability. The above metallicit value is based on material beated at 800 °C for one hour is an open crumbic in a multile furnace and model in a designator. It is preserved that the material be frenchly liquided in this manual to obtain accurate results.

The total impurities is determined by spectrochemical analysis are estimated to be less than 80 µg/g. The determined from scottent is ~3 µg/g and the determined variables content is ~1 µg/g. The assay of this material is based on the use of NBS Potentium Diagramate (SRM 1366), as the exiditing againt as described in the NBL terminative method for the precise away of articles method. The assay values accurate us companies with those abtuined from the assay of NBS Uranium Metal. SRM 960) and NBS Uranium Catal. (SRM 950a). The certified value for this lot of uranium exide has also been confirmed using a soulometric procedure.

The atomic weights used in the entrolations are: unmitted, 238,039, and oxygen, 15,9994,

This material was prepared under contract with the National Lond Company of Ohio, Climanati, Ohio, Assay of the material was performed by N. M. Trabey of the New Brunswick Laboratory, Argonas, Illinois and J. R. Moody and W. Koch of the NBS Analytical Chemistry Division. Iron and vanadium were measured by B. L. Diamondstone and S. A. Wichs of the NBS Analytical Chemistry Division.

Overall direction and coordination of the technical measurements leading to the certification were performed under the chairmanable of I. L. Barren.

The technical and support aspects involved in the propagation, certification, and issuance of this Standard Reference Material were sportfinated through the Office of Standard Reference Materials by W. P. Reed.

Washington, D.C. 20034 March 1, 1978

J. Paul Cuil, Chief Office of Suandard Reference Materials

(cva)

URANIUM ISOTOPIC CONTINUING CALIBRATION

Generated 26-MAY-2006 11:31:39.13 Ouality Assurance Report. QA Filename : \$DISK1:[ALP1.QA]GROUP_1_CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Units: Parameter Type: Generic Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.003922 Mean : 0.209390 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.2087 | | | 3-MAR-2006 09:09 chk 0.2088 | | | 2-APR-2006 08:20 chk -- Multi-Test Full Report --: Constant FWHM Description Parameter Units : channels Parameter Type : Generic Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.340910 : 7.991667 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 3-MAR-2006 09:09 chk 7.8333 2-APR-2006 08:20 chk 8.0000 -- Multi-Test Full Report --

Parameter Type: Peak

SIT-1/11R/164516-AND1p1 26-may-2006-11314196.txt (1 of 11)5/26/2006 49639 AM

: Centroid, Am-241

Parameter Units : channels

Description

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 347.736145 Std Deviation : 0.837966

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 347.7817 | | | 2-APR-2006 08:20 chk 347.7714 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.178531 Std Deviation : 0.002072

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.480862 Std Deviation : 0.068155

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

7.5331 | | | 3-MAR-2006 09:09 chk 7.3646 2-APR-2006 08:20 chk Quality Assurance Report. Generated 26-MAY-2006 11:31:39.82 : \$DISK1:[ALP1.QA]GROUP 1 BKG.QAF;4 OA Filename -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.003504 : 0.004940 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0040 | | | 1-MAR-2006 22:00 bkg 0.0000 + 144-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0030 | | | -- Multi-Test Full Report --: 4196, U-238 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.004710 : 0.006180 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0040 | | | 0.0020 | | | 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002400 Std Deviation : 0.002080

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39	O	0.0010 0.0010		
3-APR-2006 07:30	_	0.0010		

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.006852 Std Deviation : 0.004915

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0030 0.0040 0.0040	iii	

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 0.006290 Std Deviation : 0.004300 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0050 | | | 4-MAR-2006 07:39 bkg 0.0030 | | | 0.0040 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 0.005727 Std Deviation : 0.003834 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _______ 0.0050 | | | 1-MAR-2006 22:00 bkg 0.0020 | | | 4-MAR-2006 07:39 bkg 0.0030 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 0.003118 Std Deviation : 0.002305 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0040 | | |

mie:///r//transfer/qai_api_2o-may-2000-1131419	U.LXL		
4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0000 0.0010		
Multi-Test Full Report			
Description : 4882, Po-209 bkg Parameter Units : cnts/min		clide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma To Start Date : 3-SEP-2002 00:0 Mean : 0.001353 Sto	0 End Date : 30-1		30 00:00
Measurement Time Sample ID	Sample Analyst		LU SD UD BS Rej
Quality Assurance Multi-Test Full			Page : 3
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0020 0.0000 0.0020		
Multi-Test Full Report			
Description : 4901, Pu-242 bk Parameter Units : cnts/min	g (cnts/min) Parameter Type : Nu	ıclide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma T Start Date : 3-SEP-2002 00:0 Mean : 0.000947 Sto	00 End Date : 30-1		30 00:00
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0010 0.0000 0.0020		

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.001437

Std Deviation: 0.001592

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg

0.0020

4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg

0.0020 | | | 0.0040

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.002531

Std Deviation: 0.002115

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg

0.0020 | | |

4-MAR-2006 07:39 bkg

0.0010 | | |

3-APR-2006 07:30 bkg

0.0030

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (ents/min)

Parameter Units : cnts/min

Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.003078 Std Deviation : 0.002412

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	ulti-Test Full	Report (continued)		Page: 4
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0050 0.0040 0.0030	İİİ	
Multi-Test Full Rej	port			
Description : 532 Parameter Units : cr	_		clide	
Investigate Level: 2.	000000	Action Level : 3.00	0000	
Sample Driver Start Date : 3-SI Mean : 0.004	EP-2002 00:00	End Date: 30-N		30 00:00
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0080 0.0050 0.0070	ÌÌÌ	-
Multi-Test Full Re	port			
Description : 542 Parameter Units : cr	· ·	• •	clide	
Investigate Level: 2.	000000	Action Level : 3.00	0000	
Start Date : 3-SI Mean : 0.041	EP-2002 00:00	End Date: 30-N		30 00:00
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0790 0.0730 0.0880		

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : ents/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.041877 Std Deviation : 0.025460

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0770	
4-MAR-2006 07:39 bkg	0.0670	
3-APR-2006 07:30 bkg	0.0860	

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.039706 Std Deviation : 0.023962

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0700
4-MAR-2006 07:39 bkg	0.0590
3-APR-2006 07:30 bkg	0.0840

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.033863 Std Deviation : 0.020505

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg
4-MAR-2006 07:39 bkg
0.0550 | | |
3-APR-2006 07:30 bkg
0.0710 | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.030701 Std Deviation : 0.018841

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 0.0580 | | |

4-MAR-2006 07:39 bkg 0.0520 | | | | 3-APR-2006 07:30 bkg 0.0610 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.010717 Std Deviation : 0.006843

Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0150
4-MAR-2006 07:39 bkg	0.0240
3-APR-2006 07:30 bkg	0.0170

Quality Assurance Report. Generated 26-MAY-2006 11:31:46.46

QA Filename : \$DISK1:[ALP2.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.174888 Std Deviation : 0.003258

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 8.587223 Std Deviation : 0.355166

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 9.1667 | | | 2-APR-2006 08:20 chk 9.5000 | In | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units: channels Parameter Type: Peak

file:///P//Transfer/qa1_alp2_26-may-2006-11314940.txt Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 351.902924 Std Deviation: 1.168208 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk 352.6492 | | | 2-APR-2006 08:20 chk 352.7590 | | | -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: Parameter Type: Generic ---- Lower/Upper Bounds Test Parameters ----Lower Bound : 0.000000 Upper Bound : 0.500000 Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.001601 : 0.186264 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 3-MAR-2006 09:09 chk 0.1868 | | | 0.1886 2-APR-2006 08:20 chk -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Generic ---- Lower/Upper Bounds Test Parameters ----Upper Bound : 10.000000 Lower Bound : 0.000000

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.367174 Std Deviation : 0.052426

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 7.3322 | | | 2-APR-2006 08:20 chk 7.4639 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:31:47.20

QA Filename : \$DISK1:[ALP2.QA]GROUP_1_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002562 Std Deviation : 0.002014

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.004109 Std Deviation : 0.003167

Measurement Time San	mple ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg		0.0040 0.0040 0.0040	iii	
Multi-Test Full Report				
Description : 4396, U Parameter Units : cnts/n	_		clide	
Investigate Level: 2.0000	000	Action Level : 3.00	00000	
	002 00:00	st Parameters Dend Date : 30-1 Deviation : 0.00166		30 00:00
Measurement Time Sa	mple ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg		0.0020 0.0040 0.0000	İİİ	··
Multi-Test Full Report				
Description : 4688, T Parameter Units : cnts/n	_	(cnts/min) Parameter Type : Nu	clide	
Investigate Level: 2.0000	000	Action Level : 3.00	00000	
Sample Driven N-Start Date : 3-SEP-2 Mean : 0.003203	002 00:00	End Date : 30-1		30 00:00
Measurement Time Sa	mple ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-	Test Full	Report (continued)		Page: 2
Measurement Time Sa	_			
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	5	0.0030 0.0020 0.0030		

Description : 4776, U-234 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.003421 Std Deviation : 0.003312

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.003156 Std Deviation : 0.002971

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001906 Std Deviation : 0.002348

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001140 Std Deviation : 0.001378

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000859 Std Deviation : 0.001180

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

file:///P /Transfer/qa1_alp2_26-may-2006-11314940.txt
1-MAR-2006 22:00 bkg 0.0020
4-MAR-2006 07:39 bkg 0.0020
3-APR-2006 07:30 bkg 0.0000
Multi-Test Full Report
Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters
Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00
Mean : 0.001468 Std Deviation : 0.001402
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1 MAD 2006 22:00 bles 0.0020
1-MAR-2006 22:00 bkg 0.0020
4-MAR-2006 07:39 bkg 0.0010 3-APR-2006 07:30 bkg 0.0010
3-APR-2006 07:30 bkg 0.0010
Multi-Test Full Report
Description : 5275, Am-243 bkg (cnts/min)
Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters
Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00
Mean : 0.002297 Std Deviation : 0.001973
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:00 bkg 0.0030
4-MAR-2006 07:39 bkg 0.0040
3-APR-2006 07:30 bkg 0.0050

Description : 5305, Po-210 bkg (cnts/min)

Parameter Type: Nuclide Parameter Units : cnts/min

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 0.003046 Std Deviation : 0.002497 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0050 | | | 1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 0.0050 | | | 3-APR-2006 07:30 bkg 0.0070 + 11-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004046 Std Deviation : 0.003113 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0060 | | | 1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 0.0080 | | | 3-APR-2006 07:30 bkg 0.0080 -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

Mean

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 : 0.042431 Std Deviation : 0.024625

Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:00 bkg
Multi-Test Full Report
Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.044337 Std Deviation : 0.026548
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:00 bkg
Multi-Test Full Report
Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.042212 Std Deviation : 0.025508
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (continued) Page: 5
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:00 bkg

3-APR-2006 07:30 bkg

0.0980 |In| |

-- Multi-Test Full Report --

Description

: 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.037854

Std Deviation: 0.023553

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00	bkg	0.1000	In	
4-MAR-2006 07:39	bkg	0.0620		

4-MAR-2006 07:39 bkg 0.0760 3-APR-2006 07:30 bkg

-- Multi-Test Full Report --

Description

: 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.034151

Std Deviation: 0.021321

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0880 |In| | 1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 0.0520 3-APR-2006 07:30 bkg 0.0740 | | |

-- Multi-Test Full Report --

Description

: 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 3-SEP-2002 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.011139 Std Deviation : 0.007790

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0230 0.0160 0.0310		

Generated 26-MAY-2006 11:31:53.72 Quality Assurance Report. OA Filename : \$DISK1:[ALP3.QA]GROUP 1 CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Units: Parameter Type: Generic Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.005601 Mean : 0.365232 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.3700 | | | 3-MAR-2006 09:09 chk 2-APR-2006 08:20 chk 0.3755 | | | -- Multi-Test Full Report --Description : Constant FWHM Parameter Units : channels Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.235412 Mean : 8.011495 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk 8.0000 | | | 2-APR-2006 08:20 chk 8.1667 -- Multi-Test Full Report --: Centroid, Am-241 Description Parameter Units: channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 357.060303 Std Deviation : 0.900617

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 357.6643 | | | 2-APR-2006 08:20 chk 357.6266 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.371310 Std Deviation : 0.002356

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.391490 Std Deviation : 0.052211

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

7.3708 | | | 3-MAR-2006 09:09 chk 7.2971 2-APR-2006 08:20 chk Quality Assurance Report. Generated 26-MAY-2006 11:31:54.43 : \$DISK1:[ALP3.QA]GROUP 1 BKG.QAF;1 OA Filename -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.004812 Std Deviation: 0.004138 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 0.0070 | | | 1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 0.0100 | | | 3-APR-2006 07:30 bkg 0.0030 | | | -- Multi-Test Full Report --: 4196, U-238 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.006718 Std Deviation: 0.006060 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0140 | | | 0.0100 | | | 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0050 + 11

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002562 Std Deviation : 0.002285

Measurement Time	Sample ID	Sample Analyst	Value	roladionias kel
1-MAR-2006 22:00	hka	0.0020	 	
4 MAD 2006 07:20	C	0.0020		

4-MAR-2006 07:39 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.006812 Std Deviation : 0.005942

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.006031 Std Deviation: 0.004902 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0110 | | | 0.0070 4-MAR-2006 07:39 bkg 0.0110 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.005406 Std Deviation : 0.004478 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _______ 1-MAR-2006 22:00 bkg 0.0110 | | | 4-MAR-2006 07:39 bkg 0.0070 | | | 0.0090 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.003250 Std Deviation : 0.003141 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0060 | | |

0.0100 |In|4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0070 -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.002156 Std Deviation : 0.002397 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ Ouality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0070 |In| | 4-MAR-2006 07:39 bkg 0.0070 |In| | 3-APR-2006 07:30 bkg 0.0060 | | | -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001562 Std Deviation : 0.001900 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0070 |In| | 4-MAR-2006 07:39 bkg 0.0050 | | | 3-APR-2006 07:30 bkg 0.0050 | | |

SITI/IPHGHJE/ANDIp3 26-may-2006-11315658.txt (6 of 11)5/26/2006 49450 AM

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002843 Std Deviation : 0.002852

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg
4-MAR-2006 07:39 bkg
0.0030 | | |
4-MAR-2006 07:39 bkg
0.0040 | | |
3-APR-2006 07:30 bkg

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.004562 Std Deviation : 0.004249

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0070 | | | | | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.004624 Std Deviation : 0.004202

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (continued) Page : 4				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0100 0.0080 0.0080		
Multi-Test Full Re	port			
Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.	000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004843 Std Deviation : 0.004220				
Measurement Time	_			LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg bkg	0.0120 0.0090 0.0080		
Multi-Test Full Re	port			
Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.019529 Std Deviation : 0.018401				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0480 0.0480 0.0510		

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.019841 Std Deviation : 0.018403

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 0.0500 | | | |

4-MAR-2006 07:39 bkg 0.0510 | | |

0.0510 | | |

-- Multi-Test Full Report --

3-APR-2006 07:30 bkg

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.018873 Std Deviation : 0.017331

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0490 | | | 0.0510 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.015404 Std Deviation : 0.015255

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0350
4-MAR-2006 07:39 bkg	0.0340
3-APR-2006 07:30 bkg	0.0530 In

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.013873 Std Deviation : 0.013859

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 0 0320 | | |

1-MAK-2000 22.00 DKg	0.0320	1 1 1
4-MAR-2006 07:39 bkg	0.0300	
3-APR-2006 07:30 bkg	0.0500	In

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.005124 Std Deviation : 0.004455

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0100	
4-MAR-2006 07:39 bkg	0.0080	
3-APR-2006 07:30 bkg	0.0090	

Generated 26-MAY-2006 11:32:01.38 Ouality Assurance Report. QA Filename : \$DISK1:[ALP4.QA]GROUP 1_CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Units: Parameter Type : Generic Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----: 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Start Date Std Deviation: 0.004547 Mean : 0.235765 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 3-MAR-2006 09:09 chk 0.2365 0.2385 2-APR-2006 08:20 chk -- Multi-Test Full Report --Description : Constant FWHM Parameter Units : channels Parameter Type : Generic Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.247916 : 7.527778 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 7.5000 | | | 3-MAR-2006 09:09 chk 2-APR-2006 08:20 chk 7.6667 | | | -- Multi-Test Full Report --: Centroid, Am-241 Description

Parameter Type : Peak

Parameter Units : channels

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 347.997253 Std Deviation : 0.967692 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk 348.6498 | | | 348.6057 | | | 2-APR-2006 08:20 chk -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: % Parameter Type: Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.295250 Std Deviation : 0.002711 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk 0.2987 | | | 0.2960 | | | 2-APR-2006 08:20 chk -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Generic ---- Lower/Upper Bounds Test Parameters ----Lower Bound : 0.000000 Upper Bound : 10.000000 Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.465235 Std Deviation : 0.047879 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 3-MAR-2006 09:09 chk 7.5022 7.4326 | | | 2-APR-2006 08:20 chk Quality Assurance Report. Generated 26-MAY-2006 11:32:02.29 OA Filename : \$DISK1:[ALP4.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004515 Std Deviation: 0.004451 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 1-MAR-2006 22:00 bkg 0.0060 | | | 4-MAR-2006 07:39 bkg 0.0090 3-APR-2006 07:30 bkg 0.0070 + 111-- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.008271 Std Deviation : 0.013576 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0050 | | |

me.mi / transienqui_aipi_20 may 2000 tto20115.bit	•			
4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0050 0.0090			
Multi-Test Full Report				
Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Ac	ction Level : 3.00	00000		
Sample Driven N-Sigma Test Parameters Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002484 Std Deviation : 0.002716				
Measurement Time Sample ID			LU SD UD BS Rej	
	0.0050 0.0030 0.0040			
Multi-Test Full Report				
Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.007514 Std Deviation : 0.009862				
Measurement Time Sample ID			LU SD UD BS Rej	
Quality Assurance Multi-Test Full Report (continued) Page: 2				
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0070 0.0050 0.0050			
Multi-Test Full Report				

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.008423 Std Deviation : 0.011764

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg	0.0070
4-MAR-2006 07:39 bkg	0.0040
3-APR-2006 07:30 bkg	0.0060

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.007756 Std Deviation : 0.011318

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 0.0070 |||

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.004514 Std Deviation : 0.006431

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg	0.0060 0.0010 0.0040		
Multi-Test Full Rep	port			
Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.	000000	Action Level : 3.00	0000	
Sample Driven N-Sigma Test Parameters Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002181 Std Deviation : 0.002876				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	ulti-Test Full	Report (continued)		Page : 3
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30 1	bkg bkg	0.0040 0.0010 0.0010		
•				
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001242 Std Deviation : 0.001601				
Measurement Time	-	_		
1-MAR-2006 22:00 4-MAR-2006 07:39 3-APR-2006 07:30	bkg bkg	0.0040 0.0010 0.0010		

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002303 Std Deviation : 0.002592

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0040 | | |

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002182 Std Deviation : 0.001895

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002242 Std Deviation : 0.002062

Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 4

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg
4-MAR-2006 07:39 bkg
0.0040 | | |
3-APR-2006 07:30 bkg
0.0030 | |

-- Multi-Test Full Report --

Description : 5320, U-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002485 Std Deviation : 0.002346

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5423, Th-228 bkg (ents/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.017089 Std Deviation : 0.015840

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

me:///17/1ransie//qa1_aip4_20-may-2000-11320-17320-	•		
1-MAR-2006 22:00 bkg	0.0430		
4-MAR-2006 07:39 bkg	0.0470	iii	
3-APR-2006 07:30 bkg	0.0330	*	
·			
Multi-Test Full Report			
Description : 5486, Am-241 bkg Parameter Units : cnts/min Parameter		clide	
Tarameter Omes . entermin	iditiotor Type	.01140	
Investigate Level: 2.000000 Ac	ction Level : 3.00	00000	
Sample Driven N-Sigma Test	Parameters		
Start Date : 8-AUG-2004 00:00		-MAY-20	030 00:00
Mean : 0.018119 Std D			
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg	0.0430	111	
4-MAR-2006 07:39 bkg	0.0520		
3-APR-2006 07:30 bkg	0.0430		
· ·			
Multi-Test Full Report			
Description : 5499, Pu-238 bkg (ente/min)		
Parameter Units: cnts/min Pa	•	ıclide	
rarameter omits . Chts/min 1 a	rameter Type . Ive	ichae	
Investigate Level: 2.000000 Action Level: 3.000000			
Hivestigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test	Parameters		
Start Date : 8-AUG-2004 00:00		-MAY-2	030 00:00
Mean : 0.017180 Std D			
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full R	eport (continued)		Page: 5
Measurement Time Sample ID			
1-MAR-2006 22:00 bkg	0.0430		
4-MAR-2006 07:39 bkg	0.0520		
3-APR-2006 07:30 bkg	0.0410		
3		1 1	
Multi-Test Full Report			

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.018392 Std Deviation : 0.025879

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:00 bkg 0.0530 | | | | 4-MAR-2006 07:39 bkg 0.0310 | | | 3-APR-2006 07:30 bkg 0.0390 | | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units: ents/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.016725 Std Deviation : 0.024221

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00	bkg	0.0480		
4-MAR-2006 07:39	bkg	0.0280		
3-APR-2006 07:30	bkg	0.0370		

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.006423 Std Deviation : 0.010156

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39	_	0.0100 0.0080		
3-APR-2006 07:30	•	0.0140		

Ouality Assurance Report. Generated 26-MAY-2006 11:32:09.33

QA Filename : \$DISK1:[ALP5.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units : Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.385949 Std Deviation : 0.005662

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.326389 Std Deviation : 0.243163

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 6.6667 |In| | 2-APR-2006 08:20 chk 7.5000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 356.533112 Std Deviation : 1.567827

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 357.0318 | | | 2-APR-2006 08:20 chk 358.0470 | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.396545 Std Deviation : 0.002088

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 0.3975 | | | 2-APR-2006 08:20 chk 0.3964 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.405073 Std Deviation : 0.053514

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

7.4141 | | | 3-MAR-2006 09:09 chk 7.3342 2-APR-2006 08:20 chk Quality Assurance Report. Generated 26-MAY-2006 11:32:10.01 : \$DISK1:[ALP5.QA]GROUP 1 BKG.QAF;1 OA Filename -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Action Level : 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.006759 Std Deviation: 0.003205 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 1-MAR-2006 22:00 bkg 0.0090 + 114-MAR-2006 07:39 bkg 0.0080 | | | 3-APR-2006 07:30 bkg 0.0090 | | | -- Multi-Test Full Report --: 4196, U-238 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.010958 Std Deviation: 0.005426 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 1-MAR-2006 22:00 bkg 0.0190 | | | 0.0150 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg 0.0130

Description : 4396, U-235 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002400 Std Deviation : 0.001225

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00	•	0.0040	1 1 1	
4-MAR-2006 07:39	0	0.0030		
3-APR-2006 07:30 t	okg	0.0010		

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.010718 Std Deviation : 0.004315

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39	C	0.0160 0.0120		
3-APR-2006 07:30	$\boldsymbol{\mathcal{C}}$	0.0130		

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Investigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test Parameters Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.010678 Std Deviation : 0.004827			
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej			
1-MAR-2006 22:00 bkg			
Multi-Test Full Report			
Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Investigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test Parameters Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.009919 Std Deviation : 0.004405			
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej			
1-MAR-2006 22:00 bkg			
Multi-Test Full Report			
Multi-Test Full Report Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Description : 4845, Th-229 bkg (cnts/min)			
Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level : 2.000000 Action Level : 3.000000 Sample Driven N-Sigma Test Parameters Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00			

4-MAR-2006 07:39 bkg 0.0060 3-APR-2006 07:30 bkg 0.0010	'
Multi-Test Full Report	
Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide	e
Investigate Level: 2.000000 Action Level: 3.00000	00
Sample Driven N-Sigma Test Parameters Start Date : 7-FEB-2005 00:00 End Date : 30-MA Mean : 0.002240 Std Deviation : 0.001588	Y-2030 00:00
Measurement Time Sample ID Sample Analyst Va	alue LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (continued)	Page : 3
Measurement Time Sample ID Sample Analyst Va	alue LU SD UD BS Rej
1-MAR-2006 22:00 bkg	Ì
Multi-Test Full Report	
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :	
Measurement Time Sample ID Sample Analyst Va	alue LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 0.0000 3-APR-2006 07:30 bkg 0.0000	<u>!</u>
Multi-Test Full Report	
Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :	
Measurement Time Sample ID Sample Analyst Va	alue LU SD UD BS Rej
1-MAR-2006 22:00 bkg 0.0010	

4-MAR-2006 07:39 bkg 0.0000 | | | 3-APR-2006 07:30 bkg 0.0030 | | |

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)
Parameter Units : cnts/min Parameter Type :

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002520 Std Deviation : 0.001939

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:00 bkg 0.0070 |In| |

4-MAR-2006 07:39 bkg 0.0030 | | |

3-APR-2006 07:30 bkg 0.0050 | |

-- Multi-Test Full Report --

Description : 5320, U-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.003479 Std Deviation : 0.002678

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full I	Report (continued)		Page : 4
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0080 0.0030 0.0050	İİİ	
Multi-Test Full Report			
Description : 5423, Th-228 bkg Parameter Units : cnts/min P		clide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Tes Start Date : 7-FEB-2005 00:00 Mean : 0.017397 Std	End Date : 30-1		030 00:00
Measurement Time Sample ID	-		
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg Multi-Test Full Report	0.0440 0.0250 0.0400		
-			
Description : 5486, Am-241 bkg Parameter Units : ents/min P	_ ,	clide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Tes Start Date : 7-FEB-2005 00:00 Mean : 0.017157 Std	End Date : 30-1		030 00:00
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 bkg 4-MAR-2006 07:39 bkg 3-APR-2006 07:30 bkg	0.0410 0.0260 0.0390	iii	

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.016357 Std Deviation : 0.015168

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:00 4-MAR-2006 07:39	_	0.0380 0.0240		
3-APR-2006 07:39	0	0.0360		

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.021917 Std Deviation : 0.025857

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rcj

0.0470 | | |

-- Multi-Test Full Report --

3-APR-2006 07:30 bkg

Description : 5805, Cm-244 bkg (cnts/min)

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.019917 Std Deviation : 0.023903

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej

1-MAR-2006 22:00 bkg	0.0350	
4-MAR-2006 07:39 bkg	0.0230	
3-APR-2006 07:30 bkg	0.0410	

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 7-FEB-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.006519 Std Deviation : 0.008450

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Report.

Generated 26-MAY-2006 11:32:16.91

OA Filename : \$DISK1:[ALP7.QA]GROUP 1 CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units:

Parameter Type: Generic

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.351482

Std Deviation: 0.005794

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 3-MAR-2006 09:09 chk 0.3536 0.3489 | | | 2-APR-2006 08:20 chk

-- Multi-Test Full Report --

Description

: Constant FWHM

Parameter Units : channels

Parameter Type : Generic

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean

: 6.869370

Std Deviation: 0.296937

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6.8333 | | | 3-MAR-2006 09:09 chk 2-APR-2006 08:20 chk 6.3333

-- Multi-Test Full Report --

Description

: Centroid, Am-241

Parameter Units : channels

Parameter Type : Peak

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 352.725342 Std Deviation : 1.045141

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 352.0954 | | | | 2-APR-2006 08:20 chk 352.0728 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.366203 Std Deviation : 0.003511

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.469157 Std Deviation : 0.055957

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 7.4595 | | | 7.4651 | | | 2-APR-2006 08:20 chk Quality Assurance Report. Generated 26-MAY-2006 11:32:17.58 : \$DISK1:[ALP7.QA]GROUP 1 BKG.QAF;1 OA Filename -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000984 Mean : 0.000825 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 | | | 1-MAR-2006 22:01 bkg 0.0030 |In| | 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0010 -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001825 Std Deviation: 0.002205 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0050 | | | 1-MAR-2006 22:01 bkg 0.0000 | | | 4-MAR-2006 07:40 bkg

0.0010 | | |

3-APR-2006 07:30 bkg

Description : 4396, U-235 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000275 Std Deviation : 0.000554

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0000
4-MAR-2006 07:40 bkg	0.0010
3-APR-2006 07:30 bkg	0.0000

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001900 Std Deviation : 0.002457

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001850 Std Deviation: 0.002815 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.00001-MAR-2006 22:01 bkg 0.0010 | | | 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0000 + 111-- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001650 Std Deviation : 0.002694 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0000 | | | 3-APR-2006 07:30 bkg 0.0000 + 111-- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Start Date Mean : 0.000750 Std Deviation : 0.001056 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg $0.0000 \mid | \mid |$

4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg	0.0010 0.0000		
Multi-Test Full Report			
Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Investigate Level: 2.000000 Ac	ction Level : 3.00	0000	
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000425 Std Deviation : 0.000501			
Measurement Time Sample ID S	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full Ro	eport (continued)		Page : 3
Measurement Time Sample ID S			LU SD UD BS Rej
1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg	0.0010 0.0010 0.0000		
Multi-Test Full Report			
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Investigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000300 Std Deviation : 0.000516			
Measurement Time Sample ID S	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg	0.0010 0.0010 0.0000		
Multi-Test Full Report			

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000475

Std Deviation: 0.000640

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0010 | |

4-MAR-2006 07:40 bkg

1-MAR-2006 22:01 bkg

0.0000 | | |

3-APR-2006 07:30 bkg

0.0000 | | |

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : ents/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.001275

Std Deviation: 0.001198

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

_____ 1-MAR-2006 22:01 bkg 0.0030 | | | 4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg 0.0000

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.001675 Std Deviation : 0.001474

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	ulti-Test Full	Report (continued)		Page: 4
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0050 0.0020 0.0020		
Multi-Test Full Re	port			
Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.	000000	Action Level : 3.00	0000	
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002325 Std Deviation : 0.001966				
Measurement Time		Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg bkg	0.0100 0.0030 0.0030		
Multi-Test Full Re	port			
Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.014923 Std Deviation : 0.011773				
Measurement Time	_	Sample Analyst		
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg bkg	0.0460 0.0260 0.0300	In 	

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.014373 Std Deviation : 0.011204

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0380 |In| |
4-MAR-2006 07:40 bkg 0.0270 | | |
3-APR-2006 07:30 bkg 0.0290 | | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.013423 Std Deviation : 0.010489

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.020742 : 0.015773 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 1-MAR-2006 22:01 bkg 0.0300 | | | 0.0280 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0430 -- Multi-Test Full Report --: 5805, Cm-244 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.018932 Mean : 0.013698 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0180 | | | 1-MAR-2006 22:01 bkg 0.0280 | | | 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0370 -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 9-AUG-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.006365 : 0.005474 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0130	
4-MAR-2006 07:40 bkg	0.0080	
3-APR-2006 07:30 bkg	0.0100	

Generated 26-MAY-2006 11:32:24.30 Quality Assurance Report. QA Filename : \$DISK1:[ALP8.QA]GROUP 1 CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Type: Generic Parameter Units: Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.375387 Std Deviation: 0.006775 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.3793 3-MAR-2006 09:09 chk 0.3839 | | | 2-APR-2006 08:21 chk -- Multi-Test Full Report --Description : Constant FWHM Parameter Units : channels Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.238664 Mean : 8.577778 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk 9.0000 | | | 2-APR-2006 08:21 chk 8.8333

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units: channels Parameter Type: Peak

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 363.218506 Std Deviation : 1.400426

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 363.5343 | | | 2-APR-2006 08:21 chk 363.5130 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.387987 Std Deviation : 0.004208

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 0.3911 | | | 2-APR-2006 08:21 chk 0.3927 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.336971 Std Deviation : 0.064671

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

7.2871 | | | 3-MAR-2006 09:09 chk 7.3052 2-APR-2006 08:21 chk Quality Assurance Report. Generated 26-MAY-2006 11:32:24.95 : \$DISK1:[ALP8.QA]GROUP 1 BKG.QAF;1 QA Filename -- Multi-Test Full Report --: 4010, Th-232 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000351 : 0.000138 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst $0.0000 \mid | \cdot |$ 1-MAR-2006 22:01 bkg 0.0010 |In| | 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0000 + 1-- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Action Level : 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000867 : 0.000586 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 0.0010 | | | 1-MAR-2006 22:01 bkg 0.0010 | | | 4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : ents/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000207 Std Deviation : 0.000412

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0000 | | | |

4-MAR-2006 07:40 bkg 0.0010 | | |

3-APR-2006 07:30 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000655 Std Deviation : 0.000769

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0000 | | |

4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000820 : 0.000621 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0000 + 110.0000 + 114-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000586 Std Deviation : 0.000824 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej $0.0000 \mid \cdot \mid \cdot \mid$ 1-MAR-2006 22:01 bkg 0.0000 + 14-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 : 0.000414 Std Deviation : 0.000780 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0000 + 1 + 1

4-MAR-2006 07:40 bkg			
Multi-Test Full Report			
Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Investigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test Parameters Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000379 Std Deviation : 0.000728			
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej			
Quality Assurance Multi-Test Full Report (continued) Page: 3			
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej			
1-MAR-2006 22:01 bkg			
Multi-Test Full Report			
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide			
Investigate Level: 2.000000 Action Level: 3.000000			
Sample Driven N-Sigma Test Parameters Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000448 Std Deviation : 0.000632			
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej			
1-MAR-2006 22:01 bkg			
Multi-Test Full Report			

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000690 Std Deviation : 0.001039

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000793 Std Deviation : 0.000901

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0010 | | |

4-MAR-2006 07:40 bkg 0.0030 |In| | 3-APR-2006 07:30 bkg 0.0030 |In| |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000931 Std Deviation : 0.001163

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	ulti-Test Full	Report (continued)		Page : 4
Measurement Time		Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg bkg	0.0020 0.0030 0.0030		
Multi-Test Full Re	port			
Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.	000000	Action Level : 3.00	0000	
Sample Driven N-Sigma Test Parameters Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001138 Std Deviation : 0.001481				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0020 0.0050 0.0040	In	
Multi-Test Full Re	port			
Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.012136 Std Deviation : 0.012234				
Measurement Time	_			LU SD UD BS Rej
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30 1	bkg bkg	0.0280 0.0320 0.0300		

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.014343 Std Deviation : 0.014392

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.013653 Std Deviation : 0.013588

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-APR-2006 07:30 bkg 0.0320 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.011447 Std Deviation : 0.012559

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0370 In
4-MAR-2006 07:40 bkg	0.0310
3-APR-2006 07:30 bkg	0.0400 In

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.010826 Std Deviation : 0.011951

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0340	
4-MAR-2006 07:40 bkg	0.0300	
3-APR-2006 07:30 bkg	0.0400	In

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 13-SEP-2004 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.003930 Std Deviation : 0.004148

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0090
4-MAR-2006 07:40 bkg	0.0110
3-APR-2006 07:30 bkg	0.0030

Quality Assurance Report. Generated 26-MAY-2006 11:32:31.05

QA Filename : \$DISK1:[ALP9.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.373796 Std Deviation : 0.003643

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.233334 Std Deviation : 0.360775

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 6.3333 | | |

2-APR-2006 08:21 chk 6.3333 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 349.207825 Std Deviation : 0.695822

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 349.0484 | | | | 2-APR-2006 08:21 chk 348.9410 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.398104 Std Deviation : 0.002628

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 0.3983 | | | 2-APR-2006 08:21 chk 0.3971 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.376266 Std Deviation : 0.029858

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6.3367 3-MAR-2006 09:09 chk 6.3966 2-APR-2006 08:21 chk Quality Assurance Report. Generated 26-MAY-2006 11:32:31.70 : \$DISK1:[ALP9.QA]GROUP 1 BKG.QAF;1 OA Filename -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----: 30-MAY-2030 00:00 Start Date : 26-AUG-2005 00:00 End Date : 0.000812 Std Deviation: 0.000750 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 0.0020 | | | 1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0000 + 11-- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000910 : 0.001187 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0010 | | | 0.0010 | | | 4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000437 Std Deviation : 0.000512

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000937 Std Deviation : 0.000929

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.001340 : 0.001062 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0040 |In| 0.0000 4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --: 4788, Np-237 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001062 Std Deviation : 0.001526 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0040 | | | 1-MAR-2006 22:01 bkg 0.0000 + 114-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000687 Std Deviation : 0.001078 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0030 |In| |

0.0000 | | | 4-MAR-2006 07:40 bkg 0.0020 + 1113-APR-2006 07:30 bkg -- Multi-Test Full Report --: 4882, Po-209 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000750 Std Deviation: 0.001000 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Ouality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0030 |In|1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0020 -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000687 Std Deviation : 0.001014 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0030 |In| | 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0020

SIT 1/18 HGHICAN Dip9 26-may-2006-11323365.txt (6 of 11)5/26/2006 48927 AM

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000187 Std Deviation : 0.000403

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000937 Std Deviation : 0.001123

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-APR-2006 07:30 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001250 Std Deviation : 0.001653

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
Quality Assurance M	ulti-Test Full	Report (continued)		Page: 4	
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0060 0.0030 0.0010	İ		
Multi-Test Full Rep	port				
Description : 532 Parameter Units : cr			clide		
Investigate Level: 2.	000000	Action Level : 3.00	0000		
Sample Driven N-Sigma Test Parameters Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001250 Std Deviation : 0.001653					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0050 0.0030 0.0010			
Multi-Test Full Re	port				
Description : 542 Parameter Units : cr			clide		
Investigate Level: 2.000000 Action Level: 3.000000					
Sample Driven N-Sigma Test Parameters Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.008124 Std Deviation : 0.009520					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0220 0.0240 0.0190			

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.007749 Std Deviation : 0.008977

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0190	
4-MAR-2006 07:40 bkg	0.0240	
3-APR-2006 07:30 bkg	0.0180	

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.007374 Std Deviation : 0.008554

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----: 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Start Date Std Deviation: 0.008914 : 0.007499 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0100 1-MAR-2006 22:01 bkg 0.0090 | | | 4-MAR-2006 07:40 bkg 0.0270 |In| | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --: 5805, Cm-244 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.007009 : 0.005249 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0080 | | | 1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0040 | | | 3-APR-2006 07:30 bkg 0.0220 |In| | -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 26-AUG-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.002065 Mean : 0.002000 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0040
4-MAR-2006 07:40 bkg	0.0020
3-APR-2006 07:30 bkg	0.0050

Ouality Assurance Report. Generated 26-MAY-2006 11:30:28.49

QA Filename : \$DISK1:[ALP10.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.310166 Std Deviation : 0.004460

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.993056 Std Deviation : 0.238145

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 7.0000 | | | 2-APR-2006 08:21 chk 7.3333 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 336.510956 Std Deviation : 0.730491

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 337.5063 | | | 2-APR-2006 08:21 chk 337.5312 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.394758 Std Deviation : 0.004326

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.460897 Std Deviation : 0.024934

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 6.4490 | | | 6.4419 2-APR-2006 08:21 chk Quality Assurance Report. Generated 26-MAY-2006 11:30:29.10 : \$DISK1:[ALP10.QA]GROUP 1 BKG.QAF;1 QA Filename -- Multi-Test Full Report --: 4010, Th-232 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 ± 0.000760 Std Deviation: 0.000925 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 0.0010 1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0020 | | | -- Multi-Test Full Report --: 4196, U-238 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000840 Std Deviation: 0.000850 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 | | | 1-MAR-2006 22:01 bkg 0.0020 | | | 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000360 Std Deviation : 0.000638

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1 MAD 2007 22 01 11

3-APR-2006 07:30 bkg 0.0000

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000800 Std Deviation : 0.001291

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-APR-2006 07:30 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.001393 Mean : 0.001240 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0060 |Ac|0.0010 | | | 4-MAR-2006 07:40 bkg 0.0010 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.001160 Std Deviation : 0.001248 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0040 |In| | 1-MAR-2006 22:01 bkg 0.0010 | | | 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000600 Std Deviation : 0.000866 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0020 | | |

0.0010 | | | 4-MAR-2006 07:40 bkg 0.0000 + 1113-APR-2006 07:30 bkg -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000440 Std Deviation : 0.000768 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Ouality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 1-MAR-2006 22:01 bkg 0.0000 + | + |4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg 0.0000 -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : ents/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000400 Std Deviation : 0.000764 Mean Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej 1-MAR-2006 22:01 bkg 0.0000 + | + |0.0010 | | | 4-MAR-2006 07:40 bkg 3-APR-2006 07:30 bkg 0.0000

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001160 Std Deviation : 0.001106

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001800 Std Deviation : 0.001633

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0040 | | |

4-MAR-2006 07:40 bkg 0.0010 | | | | 3-APR-2006 07:30 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002000 Std Deviation : 0.001825

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
Quality Assurance Multi-Test Full Report (continued) Page : 4					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0040 0.0010 0.0000			
Multi-Test Full Re	port				
Description : 532 Parameter Units : cr			elide		
Investigate Level: 2.	000000	Action Level : 3.00	0000		
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002240 Std Deviation : 0.001899					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0030 0.0030 0.0000			
Multi-Test Full Re	port				
Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide					
Investigate Level: 2.000000 Action Level: 3.000000					
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.012798 Std Deviation : 0.011785					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
1-MAR-2006 22:01 4-MAR-2006 07:40 3-APR-2006 07:30	bkg	0.0320 0.0290 0.0310			

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.012159 Std Deviation : 0.011798

 Measurement Time
 Sample ID
 Sample Analyst
 Value
 LU|SD|UD|BS Rej

 1-MAR-2006 22:01 bkg
 0.0300 | | |

1-MAR-2006 22:01 bkg	0.0300	
4-MAR-2006 07:40 bkg	0.0300	
3-APR-2006 07:30 bkg	0.0310	

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.011759 Std Deviation : 0.011758

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0290
4-MAR-2006 07:40 bkg	0.0300
3-APR-2006 07:30 bkg	0.0310

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Action Level : 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----: 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Start Date Std Deviation: 0.009819 : 0.009399 Mean Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 0.0230 | | | 1-MAR-2006 22:01 bkg 0.0230 | | | 4-MAR-2006 07:40 bkg 0.0260 3-APR-2006 07:30 bkg -- Multi-Test Full Report --: 5805, Cm-244 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----: 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Start Date Std Deviation: 0.006170 : 0.005639 Mean Sample ID Sample Analyst Value LU|SD|UD|BS Rej Measurement Time 0.0130 1-MAR-2006 22:01 bkg 0.0110 4-MAR-2006 07:40 bkg 0.0130 3-APR-2006 07:30 bkg -- Multi-Test Full Report --: 6113, Cm-242 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.003226 Mean : 0.003080

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0060	
4-MAR-2006 07:40 bkg	0.0100	In
3-APR-2006 07:30 bkg	0.0090	

Quality Assurance Report.

Generated 26-MAY-2006 11:30:38.11

OA Filename

: \$DISK1:[ALP11.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units:

Parameter Type: Generic

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date

: 30-MAY-2030 00:00

Mean

: 0.426614

Std Deviation: 0.004687

Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst _____ 0.4223 | | | 3-MAR-2006 09:09 chk

2-APR-2006 08:21 chk

0.4254

-- Multi-Test Full Report --

Description

: Constant FWHM

Parameter Units : channels

Parameter Type : Generic

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean

: 8.152778

Std Deviation: 0.273273

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk

8.1667 | | |

2-APR-2006 08:21 chk

8.1667

-- Multi-Test Full Report --

Description

: Centroid, Am-241

Parameter Units: channels

Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 341.103607 Std Deviation : 1.413680

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 340.7458 | | | | 2-APR-2006 08:21 chk 340.7838 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.428646 Std Deviation : 0.003081

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 0.4302 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.424412 Std Deviation : 0.044116

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 6.4450 | | | 6.4337 2-APR-2006 08:21 chk Quality Assurance Report. Generated 26-MAY-2006 11:30:38.80 QA Filename : \$DISK1:[ALP11.QA]GROUP_1_BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000935 : 0.000923 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0020 | | | 4-MAR-2006 07:40 bkg 0.0010 | | | 0.0020 | | | 3-APR-2006 07:30 bkg 7-APR-2006 06:05 bkg 0.0000 -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.001154 Std Deviation : 0.001155 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 + 111-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.0010 | | | 0.0020 | | | 3-APR-2006 07:30 bkg

7-APR-2006 06:05 bkg

-- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : ents/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000423 Std Deviation: 0.000703 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0000 4-MAR-2006 07:40 bkg $0.0000 \mid \cdot \mid \cdot \mid$ 3-APR-2006 07:30 bkg 0.0000 + +7-APR-2006 06:05 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 : 0.000884 Std Deviation : 0.000952 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0010 4-MAR-2006 07:40 bkg 0.0010 3-APR-2006 07:30 bkg 0.0000 | | | 7-APR-2006 06:05 bkg 0.0000 + 11-- Multi-Test Full Report --

0.0010 | | |

Description : 4776, U-234 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001077 Std Deviation : 0.001197

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	bkg	0.0000		
4-MAR-2006 07:40	hko	0.0010		

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000961 Std Deviation : 0.001182

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg
4-MAR-2006 07:40 bkg
0.0000 | | |
3-APR-2006 07:30 bkg
0.0020 | | |
7-APR-2006 06:05 bkg
0.0010 | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date

: 31-JAN-2005 00:00 End Date

: 30-MAY-2030 00:00

Mean

: 0.000923

Std Deviation: 0.001017

Measurement Time

Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg

0.0010 | | |

Quality Assurance Multi-Test Full Report (continued)

Page: 3

._____

Measurement Time Sample ID Sample Analyst

Value LU|SD|UD|BS Rej

4-MAR-2006 07:40 bkg

0.0010 | | |

3-APR-2006 07:30 bkg

0.0020 | | |

7-APR-2006 06:05 bkg

0.0010 | | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date

: 30-MAY-2030 00:00

Mean

: 0.000884

Std Deviation: 0.001032

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg

0.0010 | | |

0.0010 | | |

3-APR-2006 07:30 bkg 7-APR-2006 06:05 bkg 0.0010 0.0000

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (ents/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000654 Std Deviation : 0.000977

Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
1-MAR-2006 22:01 bkg				
Multi-Test Full Report				
Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002038 Std Deviation : 0.001636				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
1-MAR-2006 22:01 bkg				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
3-APR-2006 07:30 bkg				
Multi-Test Full Report				
Description : 5275, Am-243 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.003923 Std Deviation : 0.004107				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
1-MAR-2006 22:01 bkg 0.0070				

me:///r//transfer/qat_aip11_20-may-2000-11504089.txt				
4-MAR-2006 07:40 bkg 0.0060 3-APR-2006 07:30 bkg 0.0040 7-APR-2006 06:05 bkg 0.0050				
Multi-Test Full Report				
Description : 5305, Po-210 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004576 Std Deviation : 0.004186				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
1-MAR-2006 22:01 bkg				
Multi-Test Full Report				
Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004845 Std Deviation : 0.004423				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
1-MAR-2006 22:01 bkg				
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej				
7-APR-2006 06:05 bkg 0.0060				

-- Multi-Test Full Report --

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.015383 Std Deviation : 0.015059

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	bkg	0.0370		
4-MAR-2006 07:40	bkg	0.0290	i i i	
3-APR-2006 07:30	bkg	0.0340		
7-APR-2006 06:05	bkg	0.0300		

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.014998 Std Deviation : 0.014534

Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 bkg	0.0320	 	
4-MAR-2006 07:40 bkg	0.0350		
3-APR-2006 07:30 bkg	0.0310		
7-APR-2006 06:05 bkg	0.0360		

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.014114 Std Deviation : 0.013859

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	U	0.0290		··
4-MAR-2006 07:40	bkg	0.0350		

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.011883 Std Deviation : 0.012410

Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	hkø	0.0230		

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.008845 Std Deviation : 0.009018

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	bkg	0.0160	 	
4-MAR-2006 07:40	bkg	0.0180		
3-APR-2006 07:30 bkg		0.0210		
7-APR-2006 06:05	bkg	0.0260		

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 31-JAN-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.003500 Std Deviation : 0.003646

 Measurement Time
 Sample ID
 Sample Analyst
 Value
 LU|SD|UD|BS Rej

 1-MAR-2006 22:01 bkg
 0.0070 | | |

 4-MAR-2006 07:40 bkg
 0.0070 | | |

 3-APR-2006 07:30 bkg
 0.0060 | | |

 7-APR-2006 06:05 bkg
 0.0140 |In| |

Generated 26-MAY-2006 11:30:50.86 Quality Assurance Report. QA Filename : \$DISK1:[ALP12.QA]GROUP 1 CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Units: Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.032062 : 0.469119 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.4800 3-MAR-2006 09:09 chk 2-APR-2006 08:21 chk 0.4806 | | | -- Multi-Test Full Report --Description : Constant FWHM Parameter Units: channels Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 6.354610 Std Deviation: 0.871320 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 3-MAR-2006 09:09 chk

6.8333 2-APR-2006 08:21 chk 7.0000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units: channels Parameter Type: Peak Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 324.825287 Std Deviation : 2.408602

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

3-MAR-2006 09:09 chk 327.5369 | | | 2-APR-2006 08:21 chk 327.5511 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.363015 Std Deviation : 0.025292

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.573965 Std Deviation : 0.048627

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6.5479 | | | 3-MAR-2006 09:09 chk 2-APR-2006 08:21 chk 6.5355 Quality Assurance Report. Generated 26-MAY-2006 11:30:51.54 QA Filename : \$DISK1:[ALP12.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000490 Std Deviation: 0.000731 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.00001-MAR-2006 22:01 bkg 4-MAR-2006 07:40 bkg 0.00003-APR-2006 07:30 bkg 0.0010 | | | 0.0010 | | | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 4196, U-238 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000667 Std Deviation: 0.000840 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0010 | | | 4-MAR-2006 07:40 bkg 0.0020 | | | 3-APR-2006 07:30 bkg 0.0000 + 11

file:///P]/Transfer/qa1_alp12_26-may-2006-11305397.txt 0.0000 | | | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000547 : 0.000314 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0000 | | | 4-MAR-2006 07:40 bkg 0.0010 | | | 3-APR-2006 07:30 bkg $0.0000 \mid \cdot \mid \cdot \mid$ 7-APR-2006 06:05 bkg 0.0010 -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000431 Std Deviation: 0.000728 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0030 |Ac|

0.0000 + 1 + 1

0.0000

0.0000 | | |

-- Multi-Test Full Report --

4-MAR-2006 07:40 bkg

3-APR-2006 07:30 bkg

7-APR-2006 06:05 bkg

Description : 4776, U-234 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000608 Std Deviation : 0.000896

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000608 Std Deviation : 0.000961

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg	0.0040	Ac
4-MAR-2006 07:40 bkg	0.0000	
3-APR-2006 07:30 bkg	0.0000	
7-APR-2006 06:05 bkg	0.0000	

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000627 Std Deviation : 0.000847

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg 0.0010 | | |

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000451 Std Deviation : 0.000702

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000412 Std Deviation : 0.000726

Measurement Time S	Sample ID Sa	ample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 bl 4-MAR-2006 07:40 bl 3-APR-2006 07:30 bk 7-APR-2006 06:05 bk	kg g	0.0000 0.0010 0.0000 0.0010		
Multi-Test Full Repo	rt			
Description : 5155, Parameter Units : cnts	- '	•	elide	
Investigate Level: 2.00	0000 Act	ion Level : 3.000	0000	
Sample Driven Start Date : 8-MA Mean : 0.00092	Y-2003 00:00 I	End Date : 30-		030 00:00
Measurement Time S	Sample ID Sa	ample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01 bl 4-MAR-2006 07:40 bl Quality Assurance Mul	kg	0.0030 0.0020 port (continued)		Page : 4
Measurement Time S	Sample ID Sa	ample Analyst	Value	LU SD UD BS Rej
3-APR-2006 07:30 bk 7-APR-2006 06:05 bk	_	0.0010 0.0040		 K. Pu-259
Multi-Test Full Repo	rt			
Description : 5275, Parameter Units : cnts	• `	,	lide	
Investigate Level: 2.00	0000 Act	ion Level : 3.000	0000	
Sample Driven N Start Date : 8-MAN Mean : 0.00186	Y-2003 00:00 I	End Date : 30-		030 00:00
Measurement Time S			Value	LU SD UD BS Rej
1-MAR-2006 22:01 bl	kg	0.0040		

file:///P//Transfer/qa1_alp12_26-may-2006-11305397.txt
4-MAR-2006 07:40 bkg 0.0010
3-APR-2006 07:30 bkg 0.0030
7-APR-2006 06:05 bkg 0.0070 In
Multi-Test Full Report
Description : 5305, Po-210 bkg (cnts/min)
Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters
Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00
Mean : 0.002470 Std Deviation : 0.002120
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:01 bkg 0.0040
4-MAR-2006 07:40 bkg 0.0040
3-APR-2006 07:30 bkg 0.0040
7-APR-2006 06:05 bkg 0.0060
Multi-Test Full Report
Description : 5320, U-232 bkg (cnts/min)
Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters
Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00
Mean : 0.003254 Std Deviation : 0.002791
Sta Deviation 10.002791
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
1-MAR-2006 22:01 bkg 0.0020
4-MAR-2006 07:40 bkg 0.0070
3-APR-2006 07:30 bkg 0.0050
Quality Assurance Multi-Test Full Report (continued) Page : 5
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
7-APR-2006 06:05 bkg 0.0060

-- Multi-Test Full Report --

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.024134 Std Deviation : 0.017402

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 1-MAR-2006 22:01 bkg 0.0320 | | | 4-MAR-2006 07:40 bkg 0.0510 | | | 3-APR-2006 07:30 bkg 0.0440 | | | 7-APR-2006 06:05 bkg 0.0540 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.023350 Std Deviation : 0.016906

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	hkø	0.0380		·
4-MAR-2006 07:40	~	0.0440		
3-APR-2006 07:30	bkg	0.0490		
7-APR-2006 06:05	bkg	0.0570		

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.022409 Std Deviation : 0.016359

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

1-MAR-2006 22:01 bkg
4-MAR-2006 07:40 bkg
0.0450 | | |
3-APR-2006 07:30 bkg
0.0470 | | |
7-APR-2006 06:05 bkg
0.0540 | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.020056 Std Deviation : 0.015179

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 6

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.012077 Std Deviation : 0.009199

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	bkg	0.0360	In	
4-MAR-2006 07:40	bkg	0.0210		
3-APR-2006 07:30 1	bkg	0.0250		
7-APR-2006 06:05	bkg	0.0270		

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.006332 Std Deviation : 0.004994

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
1-MAR-2006 22:01	bkg	0.0140		·
4-MAR-2006 07:40	bkg	0.0120		
3-APR-2006 07:30	bkg	0.0080		
7-APR-2006 06:05	bkg	0.0140		

Ouality Assurance Report. Generated 26-MAY-2006 11:43:08.53

QA Filename : RDND06::RDND06\$DKA100:[ALP69.QA]GROUP_1_CHK.QAF;2

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units : Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.393997 Std Deviation : 0.005538

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 0.3837 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 7.694445 Std Deviation : 0.221633

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 7.8333 | | |

-- Multi-Test Full Report --

Description : Centroid, Pu-239

Parameter Units: channels Parameter Type: Peak

Investigate Level: 2.000000 Action Level: 3.000000

file:///PJ/Transfer/qa1_alp69_26-may-2006-11431851.txt ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 317.191620 Std Deviation : 0.484522 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 5-MAR-2006 13:27 chk 317.6140 -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: Parameter Type: Generic Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.377107 Std Deviation : 0.003381 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 5-MAR-2006 13:27 chk 0.3713 | | | -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Generic ---- Lower/Upper Bounds Test Parameters ----Lower Bound : 0.000000 Upper Bound : 10.000000 Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.051849 : 7.546013 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk

7.6101 | | |

Ouality Assurance Report.

Generated 26-MAY-2006 11:43:10.74

OA Filename : RDND06::RDND06\$DKA100:[ALP69.QA]GROUP_1_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean

: 0.001424

Std Deviation: 0.001814

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______

6-MAR-2006 07:16 bkg

0.0024

7-APR-2006 06:05 bkg

0.0016 | | |

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean

: 0.002323

Std Deviation: 0.002787

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg

0.0020 | |

7-APR-2006 06:05 bkg

0.0036

-- Multi-Test Full Report --

Description

: 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Action Level : 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.000878 Std Deviation: 0.000802 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0004 6-MAR-2006 07:16 bkg 0.0020 | | | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --: 4688, Th-230 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Std Deviation: 0.003612 Mean : 0.002515 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Sample Analyst Value LU|SD|UD|BS Rej Measurement Time Sample ID 6-MAR-2006 07:16 bkg 0.0032 7-APR-2006 06:05 bkg 0.0012 -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.002969 Std Deviation : 0.003511 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0024 | | 6-MAR-2006 07:16 bkg 0.0024 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.003283 Mean : 0.002785 Measurement Time Sample ID Sample Analyst Value LU[SD[UD]BS Rej _________________________________ 0.0024 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.001767 Std Deviation : 0.001459 Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0008 | | | 7-APR-2006 06:05 bkg 0.0012 | | | -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.001167 Std Deviation : 0.000785 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0012 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.000583 Mean : 0.000858 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0008 | | 7-APR-2006 06:05 bkg 0.0016 | | | -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.001472 Std Deviation: 0.000923 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

mesmi prianstendar_arpos_20 may 2000 rem	. 00 113.13		
6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg	0.0020 0.0008		
Multi-Test Full Report			
Description : 5275, Am-243 Parameter Units : cnts/min	•	clide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Start Date : 1-JAN-2002 00 Mean : 0.002115 S	:00 End Date :		
Measurement Time Sample II			
6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg	0.0028 0.0024		
Multi-Test Full Report			
Description : 5305, Po-210 b Parameter Units : cnts/min	- · ·	clide	
Investigate Level: 2.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Start Date : 1-JAN-2002 00 Mean : 0.002736 S	:00 End Date :		-
Measurement Time Sample II	_		
Quality Assurance Multi-Test Fu			
Measurement Time Sample II	-		
6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg	0.0048 0.0044		
Multi-Test Full Report			

SiT:!//**IRIGIHIC/AN**_Dip69_26-may-2006-11431851.txt (7 of 10)5/26/2006 **\$50**32 AM

: 5320, U-232 bkg (cnts/min)

Parameter Type: Nuclide

Description

Parameter Units : cnts/min

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.003405 Std Deviation : 0.001694 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0068 |In| | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0060 | | | -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.026230 Std Deviation : 0.012235 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0416 | | | 0.0536 |In| | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.026422 Std Deviation : 0.012250 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0384 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0516 |In| |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.024725 Std Deviation : 0.011474

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0364 | | | 7-APR-2006 06:05 bkg 0.0476 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.022318 Std Deviation : 0.010910

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.019829 Std Deviation : 0.009717

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0368 | | | 7-APR-2006 06:05 bkg 0.0340 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.007428 Std Deviation : 0.003662

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0124 | | | 7-APR-2006 06:05 bkg 0.0156 |In| |

Quality Assurance Report. Generated 26-MAY-2006 11:43:24.87

QA Filename : RDND06::RDND06\$DKA100:[ALP71.QA]GROUP_1_CHK.QAF;2

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units : Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.370014 Std Deviation : 0.043203

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 0.3751 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 8.561111 Std Deviation : 0.507474

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 8.6667 | | |

-- Multi-Test Full Report --

Description : Centroid, Pu-239

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 309.601501 Std Deviation : 0.468245

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 309.7699 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.352200 Std Deviation : 0.040793

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 0.3519 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.504378 Std Deviation : 0.037601

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk

6.5186 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:43:27.55

QA Filename : RDND06::RDND06\$DKA100:[ALP71.QA]GROUP_1_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000621

Std Deviation: 0.000886

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg

0.0008

7-APR-2006 06:05 bkg

0.0004 | | |

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001294

Std Deviation: 0.001193

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg

0.0020 | | |

7-APR-2006 06:05 bkg

0.0012

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000806 : 0.000556 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0012 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0004 | | | -- Multi-Test Full Report --: 4688, Th-230 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Start Date : 0.000930 Std Deviation: 0.001000 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0004 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0016 | | | -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

: 27-NOV-2000 00:00 End Date

Std Deviation: 0.001002

: 0.001256

Start Date

Mean

: 30-MAY-2030 00:00

Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 0.0020 6-MAR-2006 07:16 bkg 0.0020 | | | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001223 Std Deviation : 0.000955 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0020 | | | 7-APR-2006 06:05 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000721 Mean : 0.000838 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000645 Std Deviation : 0.000703

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000558 Std Deviation : 0.000622

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001428 Std Deviation : 0.000797

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0024 6-MAR-2006 07:16 bkg 0.0032 |In| | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001912 Std Deviation : 0.001190 Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0036 7-APR-2006 06:05 bkg 0.0024 | | | -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.002594 Std Deviation : 0.001469 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0052 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg 0.0040 | | |

-- Multi-Test Full Report --

Description : 5320, U-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.001817 Mean : 0.003240 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0064 | | | 6-MAR-2006 07:16 bkg 0.0052 | | | 7-APR-2006 06:05 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 : 0.025627 Std Deviation : 0.012668 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0452 | | | 7-APR-2006 06:05 bkg 0.0504 -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.026275 Std Deviation : 0.012560 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0444 | | | | 0.0484 | | | 6-MAR-2006 07:16 bkg 7-APR-2006 06:05 bkg

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.025223 Std Deviation : 0.012071

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0428 | | | | 7-APR-2006 06:05 bkg 0.0468 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.023136 Std Deviation : 0.010819

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0452 |In| | 7-APR-2006 06:05 bkg 0.0480 |In| |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.015349 Std Deviation : 0.007111

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0324 |In| | 7-APR-2006 06:05 bkg 0.0260 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-NOV-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.007271 Std Deviation : 0.003448

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0148 |In| | 7-APR-2006 06:05 bkg 0.0148 |In| | Quality Assurance Report. Generated 26-MAY-2006 11:43:48.34

QA Filename : RDND06::RDND06\$DKA100:[ALP83.QA]GROUP_1_CHK.QAF;2

-- Multi-Test Full Report --

Description : Centroid, U-238

Parameter Units: channel Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 178.9082 | | | 9-APR-2006 11:36 chk 178.3849 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 8.5000 | | | 9-APR-2006 11:36 chk 9.0000 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Efficiency, Po-210

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 9-APR-2006 11:36 chk	0.3392 0.3450
Multi-Test Full Report	
Description : Energy Calibration Slope Parameter Units : keV/chan Parameter	er Type :
Measurement Time Sample ID Sample	Analyst Value LU SD UD BS Rej
5-MAR-2006 13:27 chk 9-APR-2006 11:36 chk	7.2913 7.2746
Quality Assurance Report. Generate	ed 26-MAY-2006 11:43:49.27
QA Filename : RDND06::RDND06\$DF	XA100:[ALP83.QA]GROUP_1_BKG.QAF;2
Multi-Test Full Report	
Description : 4901, Pu-242 bkg (cnts/min Parameter Units : cnts/min Parameter	·
	Type:
Parameter Units : cnts/min Paramete	Type:
Parameter Units : cnts/min Parameter Measurement Time Sample ID Sample 6-MAR-2006 07:16 bkg	Type : Analyst Value LU SD UD BS Rej 0.0028
Parameter Units: cnts/min Parameter Measurement Time Sample ID Sample 6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	Type: Analyst Value LU SD UD BS Rej 0.0028 0.0004
Parameter Units: cnts/min Parameter Measurement Time Sample ID Sample 6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description: 5155, Pu-239 bkg (cnts/min Parameter Units: cnts/min Parameter	Type: Analyst Value LU SD UD BS Rej 0.0028 0.0004
Parameter Units: cnts/min Parameter Measurement Time Sample ID Sample 6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description: 5155, Pu-239 bkg (cnts/min Parameter Units: cnts/min Parameter	Analyst Value LU SD UD BS Rej 0.0028 0.0004

Parameter Type:

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	-	0.0460 0.0368		
Multi-Test Full Re	port			
Description : 577 Parameter Units : cr	_			
Measurement Time	-			LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	bkg	0.0460 0.0324		
Multi-Test Full Re	port			
Description : 401 Parameter Units : cp	-	. ,		
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	-	0.0020 0.0004		
Multi-Test Full Re	port			
Description : 468 Parameter Units : cp	· -	•		
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance M	Iulti-Test Full	Report (continued)		Page : 2
Measurement Time	-			
6-MAR-2006 07:16 10-APR-2006 08:00	bkg	0.0024 0.0008		
Multi-Test Full Re	port			
Description : 484 Parameter Units : cp		•		

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	_	0.0036 0.0016		-
Multi-Test Full Re	port			
Description : 542 Parameter Units : cp	_			
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	_	0.0460 0.0396		
Multi-Test Full Re	port			
Description : 419 Parameter Units : cp	_	,		
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	_	0.0008 0.0020		
Multi-Test Full Re	port			
Description : 439 Parameter Units : cp	-	*		
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	bkg	0.0000 0.0004		
Multi-Test Full Re	port			
Description : 477 Parameter Units : cp		` '		
Measurement Time	_	Sample Analyst		LU SD UD BS Rej

6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0024 0.0016		
Multi-Test Full Report		111	
Description : 5320, U-232 bkg (c Parameter Units : cpm Para	•		
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full Re	eport (continued)		Page: 3
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0056 0.0036		
Multi-Test Full Report			
Description : 4788, Np-237 bkg (Parameter Units : cpm Para	•		
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Measurement Time Sample ID S 6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	Sample Analyst 0.0024 0.0016		LU SD UD BS Rej
6-MAR-2006 07:16 bkg	0.0024		LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0024 0.0016 cnts/min)		LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description : 4882, Po-209 bkg (6	0.0024 0.0016 cnts/min) ameter Type :		LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description : 4882, Po-209 bkg (Parameter Units : cpm Para	0.0024 0.0016 cnts/min) ameter Type :	Value	
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description : 4882, Po-209 bkg (or Parameter Units : cpm P	0.0024 0.0016 cnts/min) ameter Type : Sample Analyst	Value	
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg Multi-Test Full Report Description : 4882, Po-209 bkg (or Parameter Units : cpm P	0.0024 0.0016 cnts/min) ameter Type : Sample Analyst 0.0032 0.0012	Value	

6-MAR-2006 07:16 bkg 0.0044 | | | 10-APR-2006 08:00 bkg 0.0028 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:43:56.14

QA Filename : RDND06::RDND06\$DKA100:[ALP84.QA]GROUP_1_CHK.QAF;2

-- Multi-Test Full Report --

Description : Centroid, U-238

Parameter Units : channel Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 177.2086 | | | 9-APR-2006 11:37 chk 177.1626 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 4.5000 | | | 9-APR-2006 11:37 chk 4.5000 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : Efficiency, Po-210

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

me:///r//transfer/qa1_aip84_z0-may-z000-119	440176.121		
5-MAR-2006 13:27 chk 9-APR-2006 11:37 chk	0.3612 0.3503		
Multi-Test Full Report			
Description : Encrgy Calibr Parameter Units : keV/chan			
Measurement Time Sample I	D Sample Analyst	Value	LU SD UD BS Rej
5-MAR-2006 13:27 chk 9-APR-2006 11:37 chk	7.2944 7.3002		
Quality Assurance Report.	Generated 26-MAY-	-2006 11:	43:57.06
QA Filename : RDND06::R	RDND06\$DKA100:[ALF	P84.QA]C	GROUP_1_BKG.QAF;2
Multi-Test Full Report			
Description : 4901, Pu-242 Parameter Units : cnts/min			
Measurement Time Sample I	D Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0012 0.0004		
Multi-Test Full Report			
Description : 5155, Pu-239 Parameter Units : cnts/min	-		
Measurement Time Sample I	ID Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0012 0.0016		
Multi-Test Full Report			

: 5499, Pu-238 bkg (cnts/min)

Parameter Type:

Description

Parameter Units : cnts/min

Measurement Time			Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	bkg	0.0464 0.0384		
Multi-Test Full Re	port			
Description : 577 Parameter Units : ci	_			
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	_	0.0476 0.0412		-
Multi-Test Full Re	port			
Description : 401 Parameter Units : cp	-			
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	-	0.0004 0.0000		
Multi-Test Full Re	port			
Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cpm Parameter Type :				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (continued) Page : 2				Page : 2
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	_	0.0016 0.0012		
Multi-Test Full Re	port			
Description : 484	5, Th-229 bkg	g (cnts/min)		

Parameter Units : cpm Pa	rameter Type :		
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0008 0.0004		
Multi-Test Full Report			
Description : 5423, Th-228 bkg Parameter Units : cpm Pa			
Measurement Time Sample ID		Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0496 0.0456		
Multi-Test Full Report			
Description : 4196, U-238 bkg of Parameter Units : cpm Parameter U	•		
Measurement Time Sample ID	_		
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0000 0.0004		
Multi-Test Full Report			
Description : 4396, U-235 bkg of Parameter Units : cpm Parameter U	*		
Measurement Time Sample ID	-		, , ,
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0008 0.0000		
Multi-Test Full Report			
Description : 4776, U-234 bkg (Parameter Units : cpm Pa			

Sample Analyst

Sample ID

Value LU|SD|UD|BS Rej

Measurement Time

6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	$0.0004 \\ 0.0008$		
Multi-Test Full Report			
Description : 5320, U-232 bkg (cnts/min Parameter Units : cpm Parameter	=		
Measurement Time Sample ID Sample	Analyst		LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (c			Page: 3
Measurement Time Sample ID Sample	Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0068 0.0064	1 1 1	-
Multi-Test Full Report			
Description : 4788, Np-237 bkg (cnts/mi Parameter Units : cpm Parameter :			
Measurement Time Sample ID Sample	Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0004 0.0008		-
Multi-Test Full Report			
Description : 4882, Po-209 bkg (cnts/min Parameter Units : cpm Parameter 7			
Measurement Time Sample ID Sample	Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 bkg 10-APR-2006 08:00 bkg	0.0012 0.0004	, , ,	·-
Multi-Test Full Report			
Description : 5305, Po-210 bkg (cnts/min Parameter Units : cpm Parameter :	•		

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:00	U	0.0044 0.0036		

Generated 26-MAY-2006 11:44:11.16 Quality Assurance Report. OA Filename : RDND06::RDND06\$DKA100:[ALP85.QA]GROUP 1 CHK.QAF;2 -- Multi-Test Full Report --Description : Centroid, U-238 Parameter Units : channel Parameter Type: Peak Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 : 178.890259 Std Deviation: 0.534097 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 179.4304 | | | 5-MAR-2006 13:27 chk 179.2977 | | | 9-APR-2006 11:37 chk -- Multi-Test Full Report --: Constant FWHM Description Parameter Units : channels Parameter Type : Generic Action Level : 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 : 9.980816 Std Deviation: 0.428963 Mean Measurement Time Sample ID Sample Analyst Value LUSDUDBS Rej 9.8333 5-MAR-2006 13:27 chk 9-APR-2006 11:37 chk 10.0000

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.260202 Std Deviation : 0.022388

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 0.2576 | | | 9-APR-2006 11:37 chk 0.2567 | | |

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.249036 Std Deviation : 0.021703

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 0.2525 | | | 9-APR-2006 11:37 chk 0.2440 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.162333 Std Deviation : 0.076961

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

5-MAR-2006 13:27 chk 7.2104 9-APR-2006 11:37 chk 7.2567
Quality Assurance Report. Generated 26-MAY-2006 11:44:15.24
QA Filename : RDND06::RDND06\$DKA100:[ALP85.QA]GROUP_1_BKG.QAF;2
Multi-Test Full Report
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001866 Std Deviation : 0.001049
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
6-MAR-2006 07:16 bkg
Multi-Test Full Report
Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide
Investigate Level: 2.000000 Action Level: 3.000000
Sample Driven N-Sigma Test Parameters Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.004722 Std Deviation : 0.002217
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
6-MAR-2006 07:16 bkg
Multi-Test Full Report

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.010538 Std Deviation : 0.004478

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0128 | | | 10-APR-2006 08:01 bkg 0.0140 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.054766 Std Deviation : 0.021127

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0500 | | | 10-APR-2006 08:01 bkg 0.0652 | | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Std Deviation: 0.019607 Mean : 0.050897 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0436 | | | 6-MAR-2006 07:16 bkg 10-APR-2006 08:01 bkg 0.0608 -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.044150 Std Deviation : 0.017653 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0444 | | | 0.0376 10-APR-2006 08:01 bkg -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min

Action Level: 3.000000 Investigate Level: 2.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.032421 Std Deviation : 0.013521

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 0.0304 | | | 6-MAR-2006 07:16 bkg 10-APR-2006 08:01 bkg 0.0280

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.007149 : 0.016889 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0228 6-MAR-2006 07:16 bkg 10-APR-2006 08:01 bkg 0.0180 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cpm Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 : 0.000633 Std Deviation : 0.000708 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0004 | | | 10-APR-2006 08:01 bkg 0.0004 -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cpm Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

Mean : 0.001315 Std Deviation : 0.001139

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:01	-	0.0000 0.0020		
Multi-Test Full Re	port			
Description : 484 Parameter Units : ep		' '	lide	
Investigate Level: 2.	.000000	Action Level : 3.00	0000	
Sample Drive Start Date : 5-A Mean : 0.001	PR-1996 00:0	0 End Date : 30-		030 00:00
Measurement Time		Sample Analyst		
6-MAR-2006 07:16 10-APR-2006 08:01		0.0020 0.0024		
Multi-Test Full Re	port			
Description : 542 Parameter Units : cp	-		lide	
Investigate Level : 2.	.000000	Action Level : 3.00	00000	
Sample Driven N-Sigma Test Parameters Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.059617 Std Deviation : 0.022734				
Measurement Time	_			
Quality Assurance Multi-Test Full Report (continued) Page : 4				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:16 10-APR-2006 08:01	-	0.0576 0.0668		
Multi-Test Full Re	port			

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cpm Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000803 Std Deviation : 0.000892

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0012 | | | 10-APR-2006 08:01 bkg 0.0008 | | |

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cpm Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000790 Std Deviation : 0.000768

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0000 | | | 10-APR-2006 08:01 bkg 0.0004 | | |

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cpm Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001471 Std Deviation : 0.000913

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

6-MAR-2006 07:16 bkg 0.0016 10-APR-2006 08:01 bkg 0.0028-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units : cpm Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.016663 Std Deviation : 0.006737 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 5 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 6-MAR-2006 07:16 bkg 0.0168 10-APR-2006 08:01 bkg 0.0224 -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cpm Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001548 Std Deviation : 0.001004 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _______ 0.0016 6-MAR-2006 07:16 bkg 10-APR-2006 08:01 bkg 0.0024 -- Multi-Test Full Report --

Parameter Units : cpm Parameter Type : Nuclide

Description

: 4882, Po-209 bkg (cnts/min)

6-MAR-2006 07:16 bkg

10-APR-2006 08:01 bkg

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.001063 Mean : 0.001831 Sample ID Sample Analyst Value LU|SD|UD|BS Rej Measurement Time 6-MAR-2006 07:16 bkg 0.0036 10-APR-2006 08:01 bkg 0.0036 -- Multi-Test Full Report --: 5305, Po-210 bkg (cnts/min) Description Parameter Units : cpm Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 5-APR-1996 00:00 End Date : 30-MAY-2030 00:00 Start Date Mean : 0.013815 Std Deviation: 0.005632 Sample ID Sample Analyst Value LU|SD|UD|BS Rei Measurement Time

0.0156 | | |

0.0188

Generated 26-MAY-2006 11:44:34.83 Quality Assurance Report. QA Filename : RDND06::RDND06\$DKA100:[ALP87.QA]GROUP_1_CHK.QAF;2 -- Multi-Test Full Report --Description : Centroid, U-238 Parameter Units : channel Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 5-MAR-2006 13:27 chk 109.1803 109.0604 9-APR-2006 11:37 chk -- Multi-Test Full Report --: Constant FWHM Description Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 9.0000 | | | 5-MAR-2006 13:27 chk 9-APR-2006 11:37 chk 8.6667 | | | -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: % Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 5-MAR-2006 13:27 chk 0.2999 | | | 9-APR-2006 11:37 chk 0.3036 -- Multi-Test Full Report --Description : Efficiency, Pu-239 Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

file:///P /Transfer/qa1_alp87_26-may-2006-11444150.txt
5-MAR-2006 13:27 chk 0.3158 9-APR-2006 11:37 chk 0.3149
Multi-Test Full Report
Description : Energy Calibration Slope Parameter Units : keV/chan Parameter Type :
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
5-MAR-2006 13:27 chk 6.1941
Quality Assurance Report. Generated 26-MAY-2006 11:44:35.75
QA Filename : RDND06::RDND06\$DKA100:[ALP87.QA]GROUP_1_BKG.QAF;2
Multi-Test Full Report
Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
6-MAR-2006 07:17 bkg
Multi-Test Full Report
Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :
Measurement Time Sample ID Sample Analyst Value LU SD UD BS Rej
6-MAR-2006 07:17 bkg
Multi-Test Full Report

Description : 5275, Am-243 bkg (cnts/min)
Parameter Units : cnts/min Parameter Type :

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
6-MAR-2006 07:17 10-APR-2006 08:01	•	0.0040 0.0010			
Multi-Test Full Ro	port				
Description : 548 Parameter Units : cr					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
6-MAR-2006 07:17 10-APR-2006 08:01	_	0.0270 0.0220			
Multi-Test Full Re	port				
Description : 549 Parameter Units : cr					
Measurement Time					
6-MAR-2006 07:17 10-APR-2006 08:01	bkg	0.0260 0.0210		· 	
Multi-Test Full Re	port				
Description : 5770, Pu-236 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
Quality Assurance M	Iulti-Test Full	Report (continued)		Page: 2	
Measurement Time	-	Sample Analyst			
6-MAR-2006 07:17 10-APR-2006 08:01	bkg	0.0290 0.0310			
Multi-Test Full Re	port				
Description : 580	5, Cm-244 bk	g (cnts/min)			

Parameter Units : cnts/min Parameter Type :		
Measurement Time Sample ID Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0200 10-APR-2006 08:01 bkg 0.0150		
Multi-Test Full Report		
Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :		
Measurement Time Sample ID Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0030 10-APR-2006 08:01 bkg 0.0040		
Multi-Test Full Report		
Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cpm Parameter Type :		
Measurement Time Sample ID Sample Analyst	Value	LU SD UD BS Rej
Measurement Time Sample ID Sample Analyst 6-MAR-2006 07:17 bkg 0.0000 10-APR-2006 08:01 bkg 0.0010		LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0000		LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0000 10-APR-2006 08:01 bkg 0.0010		LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0000 10-APR-2006 08:01 bkg 0.0010 Multi-Test Full Report Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cpm Parameter Type : Measurement Time Sample ID Sample Analyst	 Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0000 10-APR-2006 08:01 bkg 0.0010 Multi-Test Full Report Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cpm Parameter Type :	 Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg 0.0000 10-APR-2006 08:01 bkg 0.0010 Multi-Test Full Report Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cpm Parameter Type : Measurement Time Sample ID Sample Analyst 6-MAR-2006 07:17 bkg 0.0000	 Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg	 Value	LU SD UD BS Rej

6-MAR-2006 07:17 bkg 10-APR-2006 08:01 bkg	0.0000 0.0000		
Multi-Test Full Report			
Description : 5423, Th-228 bkg Parameter Units : cpm Par			
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full I	Report (continued)		Page: 3
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg	0.0220		
10-APR-2006 08:01 bkg	0.0220		
Multi-Test Full Report			
Description : 4196, U-238 bkg (cnts/min)		
Parameter Units : cpm Par	rameter Type:		
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg	0.0000		
10-APR-2006 08:01 bkg	0.0000		
Multi-Test Full Report			
Description : 4396, U-235 bkg (cnts/min)		
Parameter Units : cpm Par			
Measurement Time Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 bkg	0.0000		
10-APR-2006 08:01 bkg	0.0010		
Multi-Test Full Report			
Description : 4776, U-234 bkg (Parameter Units : cpm Par	•		

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 10-APR-2006 08:01	=	0.0000 0.0000		
Multi-Test Full Re	port			
Description : 532 Parameter Units : cp	-			
Measurement Time	-			
6-MAR-2006 07:17 10-APR-2006 08:01	bkg	0.0050 0.0020		
Multi-Test Full Re	port			
Description : 478 Parameter Units : c				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 10-APR-2006 08:01	-	0.0000 0.0000		
Multi-Test Full Re	eport			
Description : 488 Parameter Units : c	· -	•		
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
Quality Assurance Multi-Test Full Report (continued) Page : 4				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 10-APR-2006 08:01	U	0.0000 0.0000		 :
Multi-Test Full Re	eport			
Description : 5305, Po-210 bkg (cnts/min) Parameter Units : cpm Parameter Type :				

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
6-MAR-2006 07:17 10-APR-2006 08:01	J	0.0040 0.0020		

THORIUM SAMPLE AND QC DATA

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6060336; RTHISO Thiso by ALP

SE	OG, Matrix: 31025; FILTER			
1.0	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
1	Raw Data Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/À
	Other Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A

First Level Review _

6.0 Comments on any No response: See NCM with batch 6110472.

Pan anderson

Date 4-24-06

Page 1



Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number: 6061336

Review Item	Yes (V)	No (√)	N/A (V)_
A. Sample Analysis			
1 Are the sample yields within acceptance criteria?			<u> </u>
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			<u> </u>
3. Are the correct isotopes reported?			 ·
R OC Samples	1		
1. Is the Minimum Detectable Activity for the blank result \(\) the			1
Contract Detection Limit?	 	ļ	
Does the blank result meet the Contract criteria?	 		
2. Is the blank result < the Contract Detection Limit?		-	\
4. Is the blank result > the Contract Detection Limit but the sample		· ·	
result < the Contract Detection Limit?	 	 	1
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?		 	
9. Do the duplicate sample results and yields meet acceptance			
criteria?			· · · · · · · · · · · · · · · · · · ·
C. Other			
1. Are all Nonconformances included and noted?	 	 	
2. Are all required forms filled out?		 	
3. Was the correct methodology used?	 		
4 Was transcription checked?	 		+
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			
Comments on any "No" response: Del MCLi	<u> </u>		

Were all calculations checked at a mir Were units checked?			
Comments on any "No" response:	Del MCVI		
	·		
54	1/13/11/6/11	D-to. "	4-25-01

67

4/14/2006 10:32:58 AM Sample Preparation/Analysis Balance Id:1120373922 品36403, Brown and Caldwell , Brown & 9N Thiso PrpRc5016, SepRC5084(5003) Caldwell Pipet #: S1 Thorium-228,230,232 by Alpha Spec Report Due: 03/31/2006 01 STANDARD TEST SET Sep1 DT/Tm Tech: Batch: 6060336 FILTER pCi/sampl PM, Quote: EJ, 63174 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: HansenM Work Order, Lot, Total Amt Total Initial Aliquot Adj Aliq Amt QC Tracer Count Detector Count On | Off CR Analyst, Comments: Sample Date /Unit Acidified/Unit Amt/Unit (Un-Acidified) Prep Date Time Min id (24hr) Circle Init/Date 1 HX81N-1-AA 0.833sa 503.56sa 50.06g,in 0.0828qTHTC9385 03/30/06.pd J6B270158-1-SAMP _02/24/06,r 02/05/2006 06:00 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 2 HX81Q-1-AA 0.833sa 501.73sa 50.10g.in 0.0832q THTC9386 J6B270158-2-SAMP 03/30/06.pd 02/24/06,r 02/05/2006 06:35 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 3 HX81R-1-AA 0.833sa 500.94sa 50.41g,in 0.0838g **THTC9387** J6B270158-3-SAMP 03/30/06.pd 02/24/06,r 02/05/2006 07:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 4 HX81T-1-AA 0.833sa 508.67sa 50.07g/in 0.082g **THTC9388** J6B270158-4-SAMP 03/30/06.pd 02/24/06,r AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 5 HX81V-1-AA 0.833sa 501.14sa 50.49g,in 0.0839a **THTC9389** 03/30/06.pd J6B270158-5-SAMP 02/24/06,r 02/05/2006 08:15 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: 6 HX81V-2-AA 0.833sa 501.14sa 0.00E00g THIC 20 m 11 0.839 J6B270158-5-SAMP 9389 02/05/2006 08:15 AmtRec: FOLDER #Containers: Scr: Afpha: Beta: 7 HX81W-1-AA 0.833sa 500.55sa 50.15g,in 0.0835g THTC9390 03/30/06.pd J6B270158-6-SAMP 02/24/06,r 02/05/2006 08:40 AmtRec: FOLDER #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.20 4/24/2006 4:21:15 PM

ICOC Fraction Transfer/Status Report ByDate: 4/24/2005, 4/29/2006, Batch: '6060336', User: 'ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us A	cepting		Comments
60603 36 AC	CalcC	HansenM	3/20/2006 4:07	:18 PM	
sc	Calco	wagarr	IsBatched	3/1/2006 4:16:24 PM	1COC_RADCALC v4.8.18
SC		HansenM	InPrep2	3/20/2006 4:07:18 PM	RICH-RC-5016 REVISION 5
SC		HansenM	Prep2C	3/31/2006 9:19:00 AM	RICH-RC-5016 REVISION 5
sc		ManisD	Sep1C	4/11/2006 9:38:01 AM	RICH-AC-5087 REV 0
sc		FABREM	InSep2	4/12/2006 10:17:41 AM	RICH-RC-5003 REV 6
SC		FABREM	Sep2C	4/12/2006 1:51:32 PM	RICH-RC-5003 REV 6
SC		BlackCL	InCnt1	4/12/2006 1:56:39 PM	RICH-RD-0008 REVISION 4
sc		DAWKINSO	CalcC	4/13/2006 8:15:56 PM	RICH-RD-0008 REVISION 4
sc		BlackCL	CalcC	4/15/2006 7:24:38 AM	RICH-RD-0008 REVISION 4
AC		HansenM	3/20/2006 4:07	:26 PM	
AC		HansenM	3/31/2006 9:19	:00	
AC		ManisD	4/11/2006 9:38	:01	
AC		FABREM	4/12/2006 10 :1	7:41	
AC		FABREM	4/12/2006 1:51	:32 PM	
AC		BlackCL	4/12/2006 1:56	:39 PM	
AC		DAWKINSO	4/13/2006 8:15	:56 PM	
AC		BlackCL	4/15/2006 7 :24	:38	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa. STL RICHLAND

4/24/2006 4::	21:14 PM		Rpt DB T	ransfe	r log (Batch	n Res			VERN EN1	STL
SDG or Batch	Rpt Db Id	d BTat	LotSample CI Qc Analysis Date	ent Id Result	Matrix Cnt Uncert		ved Date woa	Sample Da บกแร	ate <u>-xpected Yielo</u>	Vo	lumes
<u>Isotope</u> 31025	9HX811		J6B2701588 P	517	AIR		00:00:8		5:15:00 AM		
ALPHA	BAS7	0	4/6/2006 8:46:58 PM	9.9486E-03	1.059E+00	1.059E+00	5.274E+00	PCI/SA	1.0	1.0E+0	2.082E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM	1.5137E+00	1.293E+00	1.298E+00	5.298E+00	PCI/SA	1.0	1.0E+0	3.405E-2
RA-226	BXTE	0	4/10/2006 2:46:00 PM	2.2347E-01	9.499E-02	9.757E-02	2.773E-01	PCI/SA	1.058	8.33E-1	2.493E-1
BA-228	BXTF	0	4/12/2006 6:42:38 AM		4.447E-01	4.617E-01	1.772E+00	PCI/SA	0.938	1.0E+0	2.493E-1
TH-228	9NS1	0	4/12/2006 8:39:15 PM ·	2.0847E-02	2.085E-02	2.09E-02	2.501E-01	PCI/SA	0.949	1.0E+0	3.375E-2
TH-230	9NS1	0	4/12/2006 8:39:15 PM	I.1639E-01	6.72E-02	6.774E-02	1.051E-01	PCI/SA	0.949	1.0E+0	3.375E-2
TH-232	9NS1	0	4/12/2006 8:39:15 PM		4.337E-02	4.34E-02	2.327E-01	PCI/SA	0.949	1.0E+0	3.375E-2
U-234	7YSR	0	4/13/2006 7:01:11 PM -	4.2672E-02	3.017E-02	3.053E-02	6.027E-01	PCI/SA	0.922	1.0E+0	3.237E-2
U-235	7 Y\$ R	0	4/13/2006 7:01:11 PM	2.1336E-02	2.134E-02				0.922	1.0 E +0	3.237E-2
U-238	7YSR	0	4/13/2006 7:01:11 PM	4.2672E-02	3.017E-02	3.053E-02	6.027E-01	PCI/SA	0.922	1.0E+0	3.237E-2
31025	9HX812	10	J6B2701589 00	0357	AIR	2/27/2	006 8:00:00	2/5/2006	6:05:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM	1.0284E+01	2.198E+00	2.444E+00	5.179E+00	PCI/SA	1.0	1.0E.+0	2.07E-2
BETA	BDS8	0	4/5/2006 10:15:47 AM		1.728E+00	2.098E+00	5.209E+00	PCI/SA	1.0	1.0E.+0	3.295E-2
BA-226	BXTE	0	4/10/2006 3:21:00 PM	2.3959E-01			6.036E-01		0.937	8.33E-1	2.48E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM	4.4971E+00	8.231E-01	8.706E-01	2.832E+00	PCI/SA	0.572	1.0E+0	2.48E-1
TH-228	9NS1	0	4/12/2006 8:39:54 PM	1.3962E-01	8.061E-02	8 126E-02	1.261E-01	PCI/SA	0.993	1.0E+0	3.283E-2
TH-230	9NS1	0	4/12/2006 8:39:54 PM	4.3303E-02	4.33E-02	4.342E-02	1. 174E-0 1	PCI/SA	0.993	1.0E+0	3.283E-2
TH-232	9NS1	0	4/12/2006 8:39:54 PM	4.3303E-02	4.33E-02	4.342E-02	1. 174E-01	PCI/SA	0.993	1.0E+0	3.283E-2
U-234	7YSR	0	4/13/2006 7:01:25 PM	3.7594E-01	1.989E-01	2.029E-01	4.74E-01	PCI/SA	1.108	1.0E+0	3.163E-2
U-235	7YSR	0	4/13/2006 7:01:25 PM	D.0E+00	0.0E+00	1.212E-01	2.681E-01	PCI/SA	1.108	1.0E+0	3.163E-2
U-238	7YSR	0	4/13/2006 7:01:25 PM	7.9127E-02	1.009E-01	1.013E-01	4.74E-01	PCI/SA	1.108	1,0E+0	3.163E-2
31025	9HX813	10	J6B27015810 00	0358	AIR	2/27/2	006 8:00:00	2/5/2006	6:40:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM	4.1731E+00	1.552E+00	1.612E+00	4.862E+00	PCI/SA	1,0	1.0E+0	2.08E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM	1.6272E+01	1.704E+00	2.031E+00	5.341E+00	PCI/SA	1.0	1.0E+0	3.367E-2
RA-226	BXTE	0	4/10/2006 3:19:01 PM	2.6862E-01	1.056E-01	1.092E-01	3.078E-01	PCI/SA	0.985	8.33E-1	2.505E-1
RA-228	BXTF	0	4/12/2006 6:42:38 AM	1.8241E+00	4.46E-01	4.643E-01	1.638E+00	PCI/SA	0.882	1.0E+0	2.505E-1
TH-228	9NS1	0	4/12/2006 8:40:10 PM	9.2818E-02	8.684E-02	8.711E-02	3.417E-01	PCI/SA	0.952	1.0E+0	3.393E-2
TH-230	9NS1	0	4/12/2006 8:40:10 PM	1.0797E-01	7.786E-02	7.827E-02	2.591E-01	PCI/SA	0.952	1.0E+0	3.393E-2
TH-232	9NS1	0	4/12/2006 8:40:10 PM	0.0E+00	0.0E+00	5.29E-02	1.17E-01	PCI/SA	0.952	1.0E+0	3.393E-2
U-234	7Y\$R	0	4/13/2006 7:01:39 PM	-1.8302E-02	1.83E-02	1.841E-02	4.378E-01	PCI/SA	0.974	1.0E+0	3.253E-2
U-235	7YSR	0	4/13/2006 7:01:39 PM	-3.6604E-02	2.588E-02	2.618E-02	5.166 E -01	PCI/SA	0.974	1.0E+0	3.253E-2
U-238	7YSR	0	4/13/2006 7:01:39 PM	-1.8302E-02	1.83E-02	1.841E-02	4.378E-01	PCI/SA	0.974	1.0E+0	3.253 E -2
31025	9HX814	10	J6B27015811 00	0359	AIR	2/27/2	2006 8:00:00	2/5/2006	7:20:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM	6.8426E+00	1.932E+00	2.058E+00	5.45E+00	PCI/SA	1.0	1,01≣+0	2.079E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM	1.8892E+01	1.608E+00				1.0	1.015+0	3.318E-2
RA-226	BXTE	0	4/10/2006 3:20:00 PM	3.0838E-01			4.564E-01		1.111	8.33E-1	2.498E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM	2.2626E+00			1.737E+00		0.811	1.0E+0	2.498E-1
TH-228	9NS1	0	4/12/2006 8:40:29 PM	5.9011E-02			5.486E-01		0.954	1.0E+0	3.404E-2
TH-230	9NS1	0	4/12/2006 8:40:29 PM	4.6719E-01	1.672E-01		3.297E-01		0.954	1.0E+0	3.404E-2
TH-232	9NS1	0	4/12/2006 8:40:29 PM	0.0E+00	0.0E+00		1.49E-01		0.954	1.0E+0	3.404E-2
U-234	7YSR	0	4/13/2006 7:01:45 PM				2.624E-01		1.011	1.0E+0	3.217E-2
U-235	7Y\$R	0	4/13/2006 7:01:45 PM	-1.9371E-02	1.937E-02				1.011	1.0E+0	3.217E-2
U-238	7YSR	0	4/13/2006 7:01:45 PM	9.6821E-02	9.682E-02	9.739E-02	2.624E-01		1.011	1.0∃+0	3.217E-2
31025	9HX815	510	J6B27015812 00	10360	AIR		2006 8:00:0 (7:50:00 AM		
ALPHA	BAS7	0	4/7/2006 8:42:10 AM	1.6852E+01			5.103E+00		1.0	1.0€÷0	2.093E-2
BETA	BDS8	0	4/5/2006 10:15:50 AM	2.5147E+01			5.06E+00		1.0	1.0E+0	3.357E-2
RA-226	BXTE	0	4/10/2006 3:21:00 PM	5.6304E-01			5.117E-01		1.039	8.33E-1	
RA-228	BXTF	0	4/12/2006 6:43:17 AM	1.8457E+00			1.73E+00		0.824	1.0E+0	2.515E-1
TH-228	9NS1	0	4/12/2006 8:40:36 PM	6.916E-01			1.249E-01		0.953	1,0E+0	
TH-230	9NS1	0	4/12/2006 8:40:36 PM	3.1663E+00			2.055E-01		0.953	1.0E+0	3.378E-2
TH-232	9NS1	0	4/12/2006 8:40:36 PM	6.0066E-01	1,605E-01	1.665E-01	1.163E-01	PCI/SA	0.953	1.0Ξ+0	3.378E-2

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^{6060336, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 14,

**Results Inserted | ReTestInserted | Updated | NotInserted => 46 | 0 | 0 | 0.

**Diff RptDb | Otims => .

	G . Ot. 1-/		LotSample Ci.	ient ld	Matrix	Receiv	red Date	Sample	Date		
SDG or Batch Isotope	Rpt Db Id Method	RTst Q	ac Analysis Date	Result	Cnt Uncert	Tot uncert	ivida	<u>Units</u>	<u> ⊨xpected Yield</u> 1.102	<i>Voli</i> 1.0E+0	umes 3.237E-2
U-234	7YSR	0	4/13/2006 7:02:17 PM		3.478E-01			PCI/SA	1.102	1.0E+0	3.237E-2
U-235	7YSR	0	4/13/2006 7:02:17 PM (9.763E-02			PCI/SA	1.102	1.0E+0	3.237E-2
U-238	7YSR	0	4/13/2006 7:02:17 PM (2.894E-01				6 8:20:00 AM	1.01+0	J.EU: L-2
31025	9HX8161	0	00021010010	0361	AIR		00:00:8 800			1.05+0	2.09E-2
ALPHA	BAS7	D	4/7/2006 8:42:10 AM	9.3614E+00	2.111E+00				1.0		3.3E-2
BETA	BDS8	D	4/5/2006 10:15:50 AM	2.4664E+01	1.871E+00		5.184E+00		1.0	1.0E+0	3.3E-2 2.483E-1
RA-226	BXTE	0	4/10/2006 3:19:01 PM 3	2.0856E+00			4.022E-01		1.141	8.33E-1	2.483E-1
RA-228	BXTF	0	4/12/2006 6:43:17 AM	2.167 8E+0 1	1.033E+00				1.008	1.0E+0 1.0E+0	3.285E-2
TH-228	9NS1	0	4/12/2006 8:40:56 PM \$		1.892E-01			PCI/SA	0.983	1.0E+0	3.285E-2
TH-230	9NS1	0	4/12/2006 8:40:56 PM			3.836E-01		PCI/SA	0.983		3.285E-2
TH-232	9NS1	0	4/12/2006 8:40:56 PM	8.2481E-01	2.13E-01	2.215E-01		PCI/SA	0.983	1.0E+0 1.0E+0	3.193E-2
U-234	7Y\$R	0	4/13/2006 7:02:23 PM				6.158 E -01	PCI/SA	0.913	1.0E+0	3.193E-2
U-235	7YSR	0	4/13/2006 7:02:23 PM		0.0E+00		2.953E-01		0.913	1.0E+0	3.193E-2 3.193E-2
U-238	7YSR	0	4/13/2006 7:02:23 PM			2.998E-01		PCI/SA	0.913	T.QE:+U	J.130L-2
31025	9HX8171	0	J6B27015814 00	0362	AIR		00:00:8 200:00		6 8:45:00 AM	4.000.0	2.095E-2
ALPHA	BAS7	0	4/7/2006 11:31:06 AM				5.119E+00		1.0	1.0E+0	3.384E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM				5.291E+00		1.0	1.0E+0 8.33E-1	5.364C-2 2.493E-1
RA-226	BXTE	0	4/10/2006 3:19:03 PM		1.07E-01		3.869E-01		0.96 0.686	1.0E+0	2.493E-1
RA-228	BXTF	0	4/12/2006 6:43:34 AM		4.38E-01	4.38E-01	2.246E+00		0.938	1.0E+0	3.311E-2
TH-228	9NS1	0	4/12/2006 8:41:12 PM				4.703E-01		0.938	1.0E+0	3.311E-2
TH-230	9NS1	0	4/12/2006 8:41:12 PM				1.611E-01		0.938	1.0E+0	3.311E-2
TH-232	9NS1	0	4/12/2006 8:41:12 PM				1.611E-01		0.938	1.0E+0	3.232E-2
U-234	7YSR	0	4/13/2006 7:02:35 PM				6.046E-01		0.918	1.0E+0	3.232E-2
U-235	7YSR	0	4/13/2006 7:02:35 PM				4.556E-01		0.918	1.0E+0	5.232E-2
U-238	7YSR	0	4/13/2006 7:02:35 PM				6.046 E- 01		0.51a 06 6:45:00 AM	1.01+0	J.EU2E E
31025	9HX818	10	CODETOTO	0363	AIR		2006 8:00:00			1.0E+0	2.085E-2
ALPHA	BAS7	0	4/7/2006 11:31:06 AM				4.857E+00		1.0	1.0E+0	3.447E-2
BETA	BDS8	0	4/5/2006 11:54:24 AM		1.219E+00			PCI/SA	1.0 1.046	8.33E-1	2.509E-1
RA-226	BXTE	0	4/10/2006 3:14:00 PM				3.131E-01		0.937	1.05+0	2.509E-1
RA-228	BXTF	0	4/12/2006 6:43:34 AM				1.662E+00		0.9	1.0E+0	3.325E-2
TH-228	9NS1	0		5.1129E-02			1.386E-01		0.9	1.0E+0	3.325E-2
TH-230	9NS1	0		0.0E+00	0.0E+00		1.289E-01		0.9	1.0E+0	3.325E-2
TH-232	9NS1	0		0.0E+00	0.0E+00		1.289E-01		0.928	1.0E+0	3.257E-2
U-234	7YSR	0	4/13/2006 7:02:45 PM		8.907E-03		4.484E-01		0.928	1.0E+0	3.257E-2
U-235	7YSR	0	4/13/2006 7:02:45 PM		0.0E+00	1,365E-01			0.928	1.0E+0	5.257E-2
U-238	7YSR	O	4/13/2006 7:02:45 PM		8.907E-03		4,484E-01		06 6:00:00 AM	1.02+0	J.201L 2
31025	9HX81N	10	GODEIGIOG.	0510	AIR		2006 8:00:00			1.0E+0	2.091E-2
ALPHA	BAS7	0	4/6/2006 6:03:23 PM				5.957E+00		1.0 1.0	1.0E+0	3.278E-2
₿ETA	BDS8	0	4/5/2006 9:14:39 AM				5.408E+00		0.993	8.33E-1	2.511E-1
RA-226	BXTE	0	4/10/2006 2:53:00 PM				5.224E-01		0.875	1.CE+0	2.511E-1
RA-228	BXTF	0	4/12/2006 6:41:36 AM				2.508E+00	PCI/SA	0.978	1.CE+0	3.281E-2
TH-228	9NS1	0	4/12/2006 8:39:15 PM			9.051E-02			0.978	1.0E+0	3.281E-2
TH-230	9NS1	0	4/12/2006 8:39:15 PM				2.524E-01	PCI/SA	0.978	1.0E+0	3.281E-2
TH-232	9NS1	0	4/12/2006 8:39:15 PM		0.0E+00		1.14E-01		1,048	1.0E+0	3.215E-2
U-234	7YSR	0	4/13/2006 6:58:37 PM				4.741E-01 4.741E-01		1.048	1.0E+0	3.215E-2
U-235	7YSR	0	4/13/2006 6:58:37 PM				2.682E-01		1,048	1.0E+0	3.215E-2
U-238	7YSR	0	4/13/2006 6:58:37 PM		0.0E+00		2.002E-01 2006 8:00:0		06 6:35:00 AM		
31025	9HX810	ີ 10	0002701002	0511	AIR				1.0	1.0E+0	2.082E-2
ALPHA	BAS7	0	4/6/2006 6:03:23 PM				0 5.973E+0		1.0	1.0E+0	3.315E-2
BETA	BDS8	0	4/5/2006 9:14:39 AM				5.034E+0		0.912	8.33E-1	2.502E-1
RA-226	BXTE	0	4/10/2006 2:51:00 PM				6.167E-01		0.772	1.0E+0	2.502E-1
RA-228	BXTF	0	4/12/2006 6:41:36 AM	1.6354E+00			2.815E+0		0.972	1.0E+0	3.318E-2
TH-228	9NS1	0	4/12/2006 8:39:15 PM	-2.1901E-02	2.19E-02	2.196E-02	2.02/E-Ui		0.972	1.0E+0	3.318E-2
TH-230	9NS1	0	4/12/2006 8:39:15 PM	-4 0757E-02	2 882F-02	2.898E-02	∠ 3.U⊏-U1	PCI/SA	0.512	ULTU	3.010L Z

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^{6060336, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 14,

**Results Inserted | ReTestInserted | Updated | NotInserted => 46 | 0 | 0 | 0.

**Diff RptDb | Otims => .

Incidence	LotSampi	Db Id	h Rpt Dt	SDG or Batch
10.234	st Oc. Analysis	hod E	Metho	Isotope
U-235 7YSR 0		-		
U.235				
1026 1738				
ALPHA BAST 0 45/2006 6:03:23 PM 4.8606±00 1.709±00 1.78±00 5.252±00 PC/ISA 1.0 1.05±0 1.0	-			U-238
BETA BDS8 0 4/5/2006 6:14:39 AM 1.3284+01 1.666E+00 1.695E+00 5.53E+00 PC/ISA 1.0 1.0E-1 RA-228 BXTF 0 4/10/2006 6:14:36 AM 4.3617±01 4.785E-01 4.785E-01 2.347±0-10 PC/ISA 1.10 14.10E-1 TH-220 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 8.20E-02 1.865E-01 PC/ISA 0.829 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM 0.2493E-01 1.247±0-11 1.26E-01 1.698E-01 PC/ISA 0.829 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM 0.2493E-01 1.247±0-11 1.26E-01 1.00SE-00 PC/ISA 0.829 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM 0.2493E-01 1.247±0-11 1.26E-01 1.00SE-00 PC/ISA 0.829 1.0E-1 U.234 7YSR 0 4/13/2006 6:59:20 PM 4.898E-02 1.388E-01 1.36E-01 1.00SE-00 PC/ISA 0.829 1.0E-1 U.235 7YSR 0 4/13/2006 6:59:20 PM 4.923E-02 1.20E-01 1.20E-01 1.20E-01 PC/ISA 0.829 1.0E-1 U.235 PHX811T10 JGB2701584 P 0.913 ALPHA BAS7 0 4/13/2006 6:59:20 PM 4.893E-02 1.20E-01 1.20E-01 1.20E-01 PC/ISA 0.783 1.0E-1 BA-226 BXTE 0 4/10/2006 2:50:01 PM 2.633E-01 2.28T±0 2.28T±0 0.28T±0				31025
RA-226 BXTE 0 4/10/2006 2:51:00 PM 1.0827E-01 8.15E-02 8.23E-02 2.838E-01 PCI/SA 1.151 8.32E RA-226 BXTE 0 4/12/2006 6:41:396 AM 4.3617E-01 4.783E-01 4.783E-01 2.347E-01 PCI/SA 0.829 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM 2.4938E-01 1.267E-01 1.26E-01 PCI/SA 0.829 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 2.4938E-01 1.26TE-01 PCI/SA 0.829 1.0E-1 U-234 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.365E-01 PCI/SA 0.829 1.0E-1 U-235 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.365E-01 PCI/SA 0.783 1.0E-1 U-236 7YSR 0 4/13/2006 6:59:20 PM 4.9711E-02 4.896E-02 5.012E-02 8.405E-01 PCI/SA 0.783 1.0E-1 U-236 9HX81T10 J6B2701584 P 0613 AIR 2/27/2006 8:00:00 2/5/2006 7.45:00 AM BETA BOSS 0 4/5/2006 914:52 AM 1.9108E-01 1.5E-00 2.22TE-00 5.405E-00 PCI/SA 1.0 1.0E-1 RA-228 BXTE 0 4/10/2006 5:90:17 PM 2.633E-01 2.287E-01 2.305E-01 8.009E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.436E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 1.3761E+00 2.699E-01 2.881E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 1.3761E+00 2.699E-01 2.881E-01 1.434E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.46E-01 1.436E-01 PCI/SA 0.843 1.0E-1 TH-232 9NS1 0 4/12/2006 8:59:32 PM 4.7162E-01 2.89E-01 1.436E-01 PCI/SA 0.891 1.0E-1 TH-232 9NS1 0 4/12/2006 8:59:32 PM 4.7162E-01 1.436E-01 1.436E-01 PCI/SA 0.891 1.0E-1 TH-232 9NS1 0 4/12/2006 8:59:32 PM 4.7162E-01 1.46E-01 1.436E-01 PCI/SA 0.891 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.891 1.0		57 O	BAS7	ALPHA
RA-226 BXTF 0		38 0	BDS8	BETA
TH-228 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 8:204E-02 1.816E-01 PCISA 0.829 1.0E+ TH-230 9NS1 0 4/12/2006 8:39:15 PM 2.4938E-01 1.247E-01 1.26E-01 1.69E-01 PCISA 0.829 1.0E+ TH-232 9NS1 0 4/12/2006 8:39:15 PM 6.2338E-02 6.235E-02 5.65E-02 1.69E-01 PCISA 0.829 1.0E+ U-234 7YSR 0 4/13/2006 6:59:20 PM 4.8988E-02 1.384E-01 1.36E-01 1.05E-00 PCISA 0.783 1.0E+ U-235 7YSR 0 4/13/2006 6:59:20 PM 4.9938E-02 1.29E-01 1.29E-01 1.05E-00 PCISA 0.783 1.0E+ U-236 7YSR 0 4/13/2006 6:99:20 PM 9.7911E-02 5.012E-02 8.40SE-01 PCISA 0.783 1.0E+ 31025 9HX81T10 J6B2701584 P 0513 AIR 2/27/2006 8:00:00 2/5/2006 7:45:00 AM A/9/2006 6:99:20 PM 9.7911E-00 2.24E+00 5.58E8+00 PCISA 1.0 1.0E+ BETA BOS8 0 4/12/2006 8:14:52 AM 1.9108E+01 1.6E+00 2.227E-00 5.858E+00 PCISA 1.0 1.0E+ TH-232 9NS1 0 4/12/2006 6:39:15 PM 3.6971E-01 1.59IE-01 2.23E-01 PCISA 0.843 1.0E+ TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.6971E-01 1.59IE-01 2.32E-00 PCISA 1.426 1.0E+ TH-232 9NS1 0 4/12/2006 6:39:15 PM 3.7049E-01 1.59IE-01 2.44E-01 8.1E-01 PCISA 0.849 1.0E+ U-236 7YSR 0 4/13/2006 6:59:32 PM 4.7716E-01 2.40SE-01 8.48E-01 1.434E-01 PCISA 0.89 1.0E+ U-236 7YSR 0 4/13/2006 6:59:32 PM 3.773E-01 2.40SE-01 8.70E-01 PCISA 0.89 1.0E+ U-238 7YSR 0 4/13/2006 6:59:32 PM 3.773E-01 1.40SE-01 1.434E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:46:58 PM 6.5328E+00 1.59IE-00 2.09IE-00 5.94ZE-00 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.44E-01 8.1E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.44E-01 8.1E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.78E-01 8.09E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.78E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.78E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 3.573E-01 2.40SE-01 2.78E-01 PCISA 0.89 1.0E+ BETA BOS8 0 4/12/2006 8:39:15 PM 2.555E-00 2.90SE-02 2.66SE-01 PCISA 0.99 1.0E- BETA BOS8 0 4/12/2006 8:39:15 PM 3.773E-01 1.0SE-00 2.0F1E-00 2.0F1E-00 PCISA 0.99 1.0E- BETA BOS8 0		E 0	BXTE	RA-226
TH-229 9NS1 0		F 0	BXTF	RA-228
TH-230 9NS1 0		1 0	9NS1	TH-228
10.236		1 0	9NS1	TH-230
U-235 7YSR 0 4/13/2006 6.59:20 PM 4.99238-02 1.295E-01 1.296E-01 7.724E-01 PCISA 0.783 1.0E-1 U-238 7YSR 0 4/13/2006 6.59:20 PM 4.97311E-02 4.895E-02 5.012E-02 8.405E-01 PCISA 0.783 1.0E-1 ALPHA BAS7 0 4/6/2006 8.46:58 PM 9.5371E-01 2.24E-00 2.454E-00 5.858E-00 PCISA 1.0 1.0 1.0E-1 BETA BDS8 0 4/6/2006 9.14:52 AM 1.9108E+01 1.8E+00 2.227E-00 5.406E-00 PCISA 1.0 1.0E-1 RA-226 BXTE 0 4/10/2006 2.50:01 PM 2.633E-01 2.287E-01 2.235E-01 8.099E-01 PCISA 0.98 3.1 1.0E-1 TH-238 9NS1 0 4/12/2006 8.39:15 PM 3.6971E-01 1.531E-01 1.555E-01 3.412E-01 PCISA 0.98 3.1 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.793E-01 1.4E-01 1.450E-01 1.434E-01 PCISA 1.426 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.793E-01 2.285E-02 2.285E-02 2.669E-01 PCISA 0.819 1.0E-1 TH-233 7YSR 0 4/13/2006 6.59:32 PM 4.715E-02 3.335E-02 6.663E-01 PCISA 0.819 1.0E-1 U-236 7YSR 0 4/13/2006 6.59:32 PM 4.715E-01 2.405E-01 1.445E-01 PCISA 0.819 1.0E-1 BETA BDS8 0 4/5/2006 9.14:52 AM 1.3832E-01 1.273E-02 6.663E-01 PCISA 0.819 1.0E-1 RA-226 BXTE 0 4/10/2006 6.59:32 PM 4.715E-01 2.335E-02 6.663E-01 PCISA 0.819 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.255TE-00 2.235E-00 2.474E-01 8.0E-1 PCISA 0.819 1.0E-1 RA-226 BXTE 0 4/10/2006 6.59:32 PM 4.715E-01 2.245E-01 2.47E-01 8.0F2E-01 PCISA 0.819 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 1.385E+00 1.395E-00 2.755E-00 PCISA 0.819 1.0E-1 RA-226 BXTE 0 4/10/2006 2.51:01 PM 2.355TE-00 2.293E-01 9.056E-00 2.545E-00 PCISA 0.819 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.255TE-00 2.293E-01 9.056E-00 2.545E-00 PCISA 0.831 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.255TE-00 2.293E-01 8.679E-00 PCISA 0.831 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.255TE-00 0.0E-00 1.566E-00 2.545E-00 PCISA 0.831 1.0E-1 TH-232 9NS1 0 4/12/2006 8.39:15 PM 3.255E-00 0.0E-00 1.566E-00 2.545E-00 PCISA 0.831 1.0E-1 RA-228 BXTE 0 4/10/2006 2.50:00 PM 3.0E-00 0.0E-00 1.46E-01 3.23E-01 PCISA 0.831 1.0E-1 RA-228 BXTE 0 4/10/2006 8.39:15 PM 3.255E-00 0.0E-00 0.0E-00 1.46E-01 3.23E-01 PCISA 0.831 1.0E-1 RA-228 BXTE 0 4/10/2006	4/12/2006	i1 0	9N\$1	TH-232
U-235		R 0	7YSR	U-234
31025 9HX81T10		R 0	7YSR	U-235
ALPHA BAST 0 4/6/2006 8:46:58 PM 9.6327E+00 2.454E+00 5.858E+00 PC/ISA 1.0 1.0E+	4/13/2006	R 0	7YSR	U-238
BETA BOSS 0 4/5/2006 9:14:52 AM 1.9108E+01 1.8E+00 2.227E+00 5.406E+00 PC/SA 1.0 1.0E-6 RA-226 BXTE 0 4/10/2006 2:50:01 PM 2.633E-01 2.287E-01 2.305E-01 8.099E-01 PC/SA 0.99 8.35E RA-228 BXTF 0 4/12/2006 8:39:15 PM 3.6971E-01 1.531E-01 1.535E-01 3.412E-01 PC/SA 0.843 1.0E-6 TH-230 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.4E-01 1.434E-01 PC/SA 1.426 1.0E-6 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.4E-01 1.434E-01 PC/SA 1.426 1.0E-6 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.4E-01 1.434E-01 PC/SA 1.426 1.0E-6 TH-233 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 6.663E-01 PC/SA 0.819 1.0E-6 U-236 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 6.663E-01 PC/SA 0.819 1.0E-6 U-236 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 6.663E-01 PC/SA 0.819 1.0E-6 U-236 9HX81W10 J6B2701586 P.0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM A/6/2006 814:58 PM 6.5328E+00 1.979E+00 2.091E+00 5.942E+00 PC/SA 1.0 1.0E-6 BETA BOSS 0 4/5/2006 814:59 AM 1.3822E+01 1.591E+00 2.017E+00 5.064E+00 PC/SA 1.0 1.0E-6 RA-226 BXTE 0 4/10/2006 8:39:15 PM 2.2164E-02 2.216E-02 2.22EE-02 2.545E+00 PC/SA 0.991 1.0E-6 TH-230 9NS1 0 4/12/2006 8:39:15 PM 2.2164E-02 2.216E-02 2.22EE-02 2.545E+00 PC/SA 0.991 1.0E-6 U-238 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/SA 0.831 1.0E-6 RA-226 BXTE 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/SA 0.831 1.0E-6 U-238 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/SA 0.831 1.0E-6 RA-226 BXTE 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 5.94E-00 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 5.71E-01 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 5.71E-01 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 8:46:58 PM 1.383E-01 1.32E-01 5.74SE-01 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 8:39:15 PM 1.443E-01 1.32E-01 5.74SE-01 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 8:39:15 PM 0.0E+00 0.0E+00 1.46E-01 5.94E-00 PC/SA 0.831 1.0E-6 RA-228 BXTE 0 4/13/2006 8:39:15 PM 0.0E+00 0.0E+00 1.46E-01 5	J6B2701	81T10	9HX8	31025
RA-228 BXTE 0 4/10/2006 250:01 PM 2.633E-01 2.305E-01 8.009E-01 PC/ISA 0.98 835E RA-228 BXTF 0 4/12/2006 6:42:05 AM 4.913E-02 4.822E-01 4.822E-01 2.32E+00 PC/ISA 0.843 1.0E4 TH-228 9NS1 0 4/12/2006 8:39:15 PM 3.6971E-01 1.551E-01 1.555E-01 3.142E-01 PC/ISA 1.426 1.0E4 TH-230 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.551E-01 1.434E-01 PC/ISA 1.426 1.0E4 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.7049E-01 1.450E-01 1.434E-01 PC/ISA 1.426 1.0E4 TH-232 9NS1 0 4/13/2006 6:59:32 PM 3.773E-01 2.405E-01 2.44E-01 8.1E-01 PC/ISA 0.819 1.0E4 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.063E-01 PC/ISA 0.819 1.0E4 U-235 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 2.689E-01 2.738E-01 8.679E-01 PC/ISA 0.819 1.0E4 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 2.689E-01 2.738E-01 8.679E-01 PC/ISA 0.819 1.0E4 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 1.69E-01 2.689E-01 2.738E-01 8.679E-01 PC/ISA 0.819 1.0E4 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 1.69E-01 2.689E-01 2.738E-01 8.679E-01 PC/ISA 0.819 1.0E4 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 1.591E-100 2.071E-100 5.064E-100 PC/ISA 0.819 1.0E4 U-238 PM 8.71 0 4/12/2006 8:39:15 PM 2.3557E+00 1.591E-100 2.017E-100 5.064E-100 PC/ISA 0.34 1.0 1.0E4 U-235 7YSR 0 4/12/2006 8:39:15 PM 4.23557E+00 1.088E-101 7.098E-01 PC/ISA 0.391 1.0E4 U-234 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 8:39:15 PM 1.433E-01 1.26E-01 1.22E-01 5.71E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 8:039:15 PM 0.0E400 0.0E+00 1.46E-01 3.23E-01 PC/ISA 0.831 1.0E5 U-235 9YSR 0 4/13/2006 8:39:15 PM 0.0E400 0.0E+0	4/6/2006 8	57 0	BAS7	ALPHA
RA-228 BXTF 0 4/12/2006 8:39:15 PM 3.6971E-01 1.531E-01 1.555E-01 3.412E-01 PCI/SA 1.426 1.0E-1 TH-238 9NS1 0 4/12/2006 8:39:15 PM 3.6971E-01 1.531E-01 1.555E-01 3.412E-01 PCI/SA 1.426 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM 3.704PE-01 1.4E-01 1.43E-01 PCI/SA 1.426 1.0E-1 TH-232 9NS1 0 4/12/2006 8:39:15 PM 3.704PE-01 1.4E-01 1.43E-01 PCI/SA 1.426 1.0E-1 U-234 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PCI/SA 0.819 1.0E-1 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 3.375E-02 6.663E-01 PCI/SA 0.819 1.0E-1 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 2.689E-01 2.73E-01 8.679E-01 PCI/SA 0.819 1.0E-1 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.716E-01 2.689E-01 2.73E-01 8.679E-01 PCI/SA 0.819 1.0E-1 U-238 7YSR 0 4/13/2006 8:46:58 PM 6.5328E+00 1.591E-00 2.091E+00 5.942E+00 PCI/SA 0.819 1.0E-1 BETA BDS8 0 4/5/2006 8:46:58 PM 6.5328E+00 1.591E-00 2.091E+00 5.942E+00 PCI/SA 0.819 1.0E-1 BA-226 BXTE 0 4/10/2006 8:39:15 PM 2.3557E+00 2.987E-01 3.921E-01 7.098E-01 PCI/SA 0.931 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM -2.2164E-02 2.205E-02 2.202E-02 2.665E-01 PCI/SA 0.931 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM -2.2164E-02 2.203E-02 2.2474E-01 PCI/SA 0.979 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM -2.2165E-02 2.206E-02 2.065E-02 2.474E-01 PCI/SA 0.979 1.0E-1 TH-230 9NS1 0 4/12/2006 8:39:15 PM -2.065E-02 2.062E-02 2.068E-02 2.474E-01 PCI/SA 0.931 1.0E-1 TH-230 9NS1 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 7:00:00 PM 0.9546-00 0.0E+00 1.59E-00 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 7:00:00 PM 0.9546-00 1.20E-00 1.30E-00 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 8:09:15 PM 1.343E-01 1.32E-01 1.32E-01 5.71E-01 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 7:00:00 PM 0.9546-00 0.0E+00 1.50E-00 1.50E-00 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 7:00:00 PM 0.9546-00 0.0E+00 1.46E-01 3.23E-01 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 8:09:15 PM 1.33E-01 1.33E-01 1.33E-01 PCI/SA 0.831 1.0E-1 TH-230 9NS1 0 4/13/2006 8:39:15 PM 0.0E-10	4/5/2006 9	38 O	BDS8	BETA
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TH-232 9NS1 0 4/12/2006 8:9:15 PM 3.7049E-01 1.4E-01 1.426E-01 1.434E-01 PC/SA 1.425 1.0E-01	4/12/2006	1 0	9NS1	TH-228
U-234	4/12/2006	i 0	9NS1	TH-230
U-235 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 3.335E-02 6.663E-01 PCI/SA 0.819 1.0E4 U-238 7YSR 0 4/13/2006 6:59:32 PM 4.717E-02 2.669E-01 2.738E-01 8.679E-01 PCI/SA 0.819 1.0E4 31025 9HX81W10 J6B2701586 P 0515 AIR 2/27/2006 8:00:00 2/5/2006 8:40:00 AM ALPHA BAS7 0 4/6/2006 8:46:58 PM 6.5328E+00 1.979E+00 2.091E+00 5.942E+00 PCI/SA 1.0 1.0E4 BETA BDS8 0 4/5/2006 9.14:52 AM 1.3832E+01 1.591E+00 2.017E+00 5.064E+00 PCI/SA 1.0 1.0E4 RA-226 BXTE 0 4/10/2006 6:42:05 AM 1.8877E+01 1.088E+00 1.591E+00 2.545E+00 PCI/SA 0.823 1.0E4 TH-228 9NS1 0 4/12/2006 8:39:15 PM 2.2164E-02 2.216E-02 2.22E-02 2.659E-01 PCI/SA 0.979 1.0E4 TH-230 9NS1 0 4/12/2006 8:39:15 PM 2.0625E-02 2.062E-02 2.068E-02 2.474E-01 PCI/SA 0.979 1.0E4 U-234 7YSR 0 4/13/2006 7:00:00 PM 0.0E+00 0.0E+00 1.46E-01 3.23E-01 PCI/SA 0.831 1.0E4 U-235 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 U-238 7YSR 0 4/13/2006 7:00:00 PM 9.5343E-02 1.216E-01 1.22E-01 5.71E-01 PCI/SA 0.831 1.0E4 BBTA BDS8 0 4/6/2006 8:46:58 PM 2.9152E+00 1.602E+00 1.63E-00 PCI/SA 0.831 1.0E4 BBTA BDS8 0 4/5/2006 9:14:52 AM 1.3292E-01 1.332E-01 1.332E-01 PCI/SA 0.936 1.0E4 BBTA BDS8 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 1.46E-01 1.332E-01 PCI/SA 0.936 1.0E4 BBTA BDS8 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 1.664E-02 1.47E-01 PCI/SA 0.936 1.0E4 BBTA BDS8 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.644E-02 1.47E-01 PCI/SA 0.936 1.0E4 BBTA BDS8 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.644E-02 1.47E-01 PCI/SA 0.936 1	4/12/2006	i 0	9NS1	TH-232
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RA-228 BXTF 0 4/12/2006 6:42:38 AM 1.8376E+00 4.353E-01 4.603E-01 1.647E+00 PCI/SA 0.913 1.0E- TH-228 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.644E-02 1.47E-01 PCI/SA 0.986 1.0E- TH-230 9NS1 0 4/12/2006 8:39:15 PM 1.0096E-01 7.139E-02 7.177E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PCI/SA 0.986 1.0E- TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00	4/10/2006			
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TH-232 9NS1 0 4/12/2006 8:39:15 PM 0.0E+00 0.0E+00 6.182E-02 1.368E-01 PC/SA 0.986 1.0E	4/12/2006			1
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U-234 7YSR 0 4/13/2006 7:00:54 PM 0.0E+00 0.0E+00 1.213E-01 2.683E-01 PC//SA 0.934 1.0E				
U-235 7YSR 0 4/13/2006 7:00:54 PM 0.0E+00 0.0E+00 1.213E-01 2.683E-01 PCI/SA 0.934 1.0E				
U-238 7YSR 0 4/13/2006 7:00:54 PM -1.9803E-02 1.98E-02 1.992E-02 4.742E-01 PCI/SA 0.934 1.0E				
31025 H0EP81AB J6C010000336 INTRA-LAB BLANK AIR 2/27/2006 8:00:00 2/5/2006 6:00:00 AM				1
TH-228 9NS1 0 B 4/13/2006 10:42:37 3.9889E-03 6.309E-03 6.316E-03 2.937E-02 PCI/SA 0.93 1.0E				i .
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1H-232 9NS1 0 B 4/15/2000 10:42:51 00:500 4.15 00:500				l l
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TH-230 9NS1 0 S 4/13/2006 10:42:38 1.901E+00 9.544E-02 1.666E-01 2.868E-02 PC#SA 1./995E+00 0.922 1.05	3 4/13/2000) اد	9N2)	IH-230

STL Richland, Wa Calc Review v4.8.18

^{6060336, **}Samples Inserted | Updated | NotUpdated => 2 | 0 | 14,

**Results Inserted | ReTestInserted | Updated | NotInserted => 46 | 0 | 0 | 0.

**Diff RptDb | Qtims => .

Batch	Nbr: 6	060336	ı	Alpha S	•	so by ALI		esult	5	4,	/15/2006 7:13	.40 AN
						nary Rep						5)//-1
status	Meth	Matrix	Wrk Ord		er Sa Act	Uncert C		Av II	LcC	IDC	QC Yield	RYId
hlso	by AL	Р	Rich	nland Star	idard Alpiso	Wo Blk Subt.					0.00/	
Calc	S1	AIR	HX81N1AA	TH-228	4.52E-02	(9.05E-02) L				4.20E-01	98%	
Calc	S1	AIR	HX81N1AA	TH-230	1.47E-01	(8.74E-02)	PCI/SA			2.52E-01	98%	
Calc	S1	AIR	HX81N1AA	TH-232	0.00E+00	(5.15E-02) ^L		A		1.14E-01	98%	
Calc	S1	AIR	HX81Q1AA	TH-228	-2.19E-02	(2.20E-02) ⁽				2.63E-01	97%	
Calc	S1	AIR	HX81Q1AA	TH-230	-4.08E-02	(2.90E-02) ^L	J4 PCI/SA			3.00E-01	97%	
Calc	S1	AIR	HX81Q1AA	TH-232	2.04E-02	(4.56E-02) ^L	J4 PCI/SA	R 6.7	0E-02	2.44E-01	97%	
Calc	S1	AiR	HX81R1AA	TH-228	0.00E+00	(8.20E-02) \	J4 PCI/SA	R		1.82E-01	83%	
Calc	S1	AIR	HX81R1AA	TH-230	2.49E-01	(1.26E-01)	PCI/SA	R		1.69E-01	83%	
Calc	S1	AIR	HX81R1AA	TH-232	6.23 E-0 2	(6.25E-02) \	J4 PCI/SA	R		1.69E-01	83%	
Calc	S1	AIR	HX81T1AA	TH-228	3.70E-01	(1.56E-01)	PCI/SA	R 9.3	36E-02	3.41E-01	143%	
Calc	S1	AIR	HX81T1AA	TH-230	1.38E+00	(2.88E-01)	PCI/SA	R		1.43E-01	143%	
Calc	S1	AIR	HX81T1AA	TH-232	3.70E-01	(1.43E-01)	PCI/SA	R		1.43E-01	143%	
Calc	S1	AIR	HX81V1AA	TH-228	1.31E-01	(9.30E-02) \	U4 PCI/SA	R 1.0	01E-01	3.21E-01	103%	
Calc	S1	AIR	HX81V1AA	TH-230	5.88E-01	(1.64E-01)	PCI/SA	B 6.6	67E-02	2.43E-01	103%	
Calc	S1	AIR	HX81V1AA	TH-232	1.42E-01	(8.43E-02)	PCI/SA	R 6.6	67E-02	2.43E-01	103%	
				TH-228	-2.22E-02	(2.22E-02)	U4 PCI/SA	R 7.2	29E-02	2.66E-01	98%	
	S1	AIR AIR	HX81W1AA HX81W1AA	TH-230	1.44E-01	(8.57E-02)	PCI/SA			2.47E-01	98%	
	S1 S1	AIR	HX81W1AA	TH-232	-2.06E-02	(2.07E-02)				2.47E-01	98%	
Calc						(6.64E-02)		R		1,47E-01	99%	
Calc	S1	AIR	HX81X1AA	TH-228	0.00E+00	(7.18E-02)		R		1.37E-01	99%	
Calc	S1	AIR	HX81X1AA	TH-230 TH-232	1.01E-01 0.00E+00	(6.18E-02)		R		1.37E-01	99%	
Calc	S1	AIR	HX81X1AA			-			06E 00	2.50E-01	95%	
Calc	S1	AIR	HX8111AA	TH-228	-2.08E-02	(2.09E-02)		n o.e	50E-UZ	1.05E-01	95% 95%	
Calc	S1	AIR	HX8111AA	TH-230	1.16E-01	(6.77E-02)	PCI/SA		38E-02	2.33E-01	95%	
Calc	S1	AIR	HX8111AA	TH-232	1.94E-02	(4.34E-02)			00L-02			
Calc	S1	AIR	HX8121AA	TH-228	1.40E-01	(8.13E-02)	PCI/SA	R		1.26E-01	99%	
Calc	S1	AIR	HX8121AA	TH-230	4,33E-02	(4.34E-02)		R		1.17E-01	99% 99%	
Calc	S1	AIR	HX8121AA	TH-232	4.33E-02	(4.34E-02)		R		1.17E-01		
Caic	S1	AIR	HX8131AA	TH-228	9.28E-02	(8.71E-02)				3.42E-01	95%	
Calc	S 1	AIR	HX8131AA	TH-230	1.08E-01	(7.83E-02)			11E-02	2.59E-01	95%	
Calc	S1	AIR	HX8131AA	TH-232	0.00E+00	(5.29E-02)	U4 PCI/SA	R		1.17E-01	95%	
Calc	S1	AIR	HX8141AA	TH-228	5.90E-02	(1.18E-01)	U4 PCI/SA	R 1.	94E-01	5.49E-01	95%	
Calc	S1	AIR	HX8141AA	TH-230	4.67E-01	(1.71E-01)	PCI/SA	R 9.	04E-02	3.30E-01	95%	
Calc	S1	AIR	HX8141AA	TH-232	0.00E+00	(6.73E-02)	U4 PCI/SA	R		1.49E-01	95%	
Calc	\$1	AIR	HX8151AA	TH-228	6.92E-01	(1.86E-01)	PCI/SA	R		1.25E-01	95%	
Calc	S1	AIR	HX8151AA	TH-230	3.17E+00	(4.37E-01)	PCI/SA	R 4.	46E-02	2.06E-01	95%	
Calc	St	AIR	HX8151AA	TH-232	6.01E-01	(1.67E-01)	PCI/SA	R		1.16E-01	95%	
Calc	S1	AIR	HX8161AA	TH-228	5.61E-01	(1.94E-01)	PCI/SA	R 9.	.72E-02	3.54E-01	98%	
ĬĎG → MLcC- MDC →	Instrume Method Minimur	Decision Leve n Detectable (Level in Conc Units of in Conc Units Concentration v for Set of Blanks	Q - Qualific All Results	er Ulis Less Than	Page 1 Lc = 1.645*TPU ee Digits Reguardle	ess of Significan	ıts			RecCnt:50 RADCALC \	

Nbr: 6	060336		Alpha S				,	esu	ılts	2	/15/2	:006 7:1:	3:49 AM
				Sumi	nary He	oor	Ί						
Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Αv	ILcC	IDC	QC	Yield	RYId
S1	AIR	HX8161AA	TH-230	2.20E+00	(3.84E-01)		PCI/SA	R		1.49E-01		98%	
S1	AIR	HX8161AA	TH-232	8.25E-01	(2.21E-01)		PCI/SA	R		1.49E-01		98%	
S1	AIR	HX8171AA	TH-228	1.92E-01	(1.36E-01)	U4	PCI/SA	R	1.49E-01	4.70E-01		94%	
S1	AIR	HX8171AA	TH-230	1.19E-01	(8.45E-02)	U4	PCI/SA	R		1.61E-01		94%	
S1	AIR	HX8171AA	TH-232	5.95E-02	(5.96E-02)	U4	PCI/SA	R		1.61E-01		94%	
S1	AIR	HX8181AA	TH-228	5,11E-02	(5.13E-02)	U4	PCI/SA	R		1.39E-01		90%	
S1	AIR	HX8181AA	TH-230	0.00E+00	(5.82E-02)	U4	PCI/SA	R		1.29E-01		90%	
S1	AIR	HX8181AA	TH-232	0.00E+00	(5.82E-02)	U4	PCI/SA	R		1.29E-01		90%	
S1	AIR	H0EP81AA	TH-228	3.99E-03	(6.32E-03)	Ų4	PCI/SA	R	9.28E-03	2.94E-02	В	93%	
S1	AIR	HOEP81AA	TH-230	9.28E-03	(6.72E-03)	U4	PCI/SA	R	6.10E-03	2.23E-02	В	93%	
S1	AIR	H0EP81AA	TH-232	0.00E+00	(4.54E-03)	U4	PCI/SA	R		1.01E-02	В	93%	
S1	AIR	H0EP81AC	TH-228	-5.14E-03	(7.28E-03)	U4	PCI/SA	R	1.69E-02	4.78E-02	S	92%	
S1	AIR	H0EP81AC	TH-230	1.90E+00	(1.67E-01)		PCI/SA	R	7.87E-03	2.87E-02	S	92%	106%
S1	AIR	H0EP81AC	TH-232	0.00E+00	(5.86E-03)	U4	PCI/SA	R		1.30E-02	S	92%	
5	\$Meth \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1	\$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR \$1 AIR	Meth Matrix Wrk Ord S1 AIR HX8161AA S1 AIR HX8161AA S1 AIR HX8171AA S1 AIR HX8171AA S1 AIR HX8181AA S1 AIR HX8181AA S1 AIR HX8181AA S1 AIR H0EP81AA S1 AIR H0EP81AA S1 AIR H0EP81AA S1 AIR H0EP81AC S1 AIR H0EP81AC S1 AIR H0EP81AC	Meth Matrix Wrk Ord Parameter S1 AIR HX8161AA TH-230 S1 AIR HX8161AA TH-232 S1 AIR HX8171AA TH-228 S1 AIR HX8171AA TH-230 S1 AIR HX8181AA TH-232 S1 AIR HX8181AA TH-230 S1 AIR HX8181AA TH-232 S1 AIR HX8181AA TH-232 S1 AIR H0EP81AA TH-228 S1 AIR H0EP81AA TH-232 S1 AIR H0EP81AC TH-232 S1 AIR H0EP81AC TH-228 S1 AIR H0EP81AC TH-230	Summ Meth Matrix Wrk Ord Parameter Sa Act S1 AIR HX8161AA TH-230 2.20E+00 S1 AIR HX8161AA TH-232 8.25E-01 S1 AIR HX8171AA TH-232 1.92E-01 S1 AIR HX8171AA TH-230 1.19E-01 S1 AIR HX8181AA TH-232 5.95E-02 S1 AIR HX8181AA TH-228 5.11E-02 S1 AIR HX8181AA TH-230 0.00E+00 S1 AIR HX8181AA TH-232 0.00E+00 S1 AIR H0EP81AA TH-230 9.28E-03 S1 AIR H0EP81AA TH-232 0.00E+00 S1 AIR H0EP81AC TH-228 -5.14E-03 S1 AIR H0EP81AC TH-230 1.90E+00	Summary Report Summary Report Meth Matrix Wrk Ord Parameter Sa Act Uncert S1 AIR HX8161AA TH-230 2.20E+00 (3.84E-01) S1 AIR HX8161AA TH-232 8.25E-01 (2.21E-01) S1 AIR HX8171AA TH-228 1.92E-01 (1.36E-01) S1 AIR HX8171AA TH-230 1.19E-01 (8.45E-02) S1 AIR HX8181AA TH-232 5.95E-02 (5.96E-02) S1 AIR HX8181AA TH-230 0.00E+00 (5.82E-02) S1 AIR HX8181AA TH-230 0.00E+00 (5.82E-02) S1 AIR HX8181AA TH-232 0.00E+00 (5.82E-02) S1 AIR H0EP81AA TH-230 9.28E-03 (6.32E-03) S1 AIR H0EP81AA TH-230 0.00E+00 (4.54E-03) S1 AIR H0EP81AC TH-230 1.90E+00 (7.28E-03)	Summary Report Meth Matrix Wrk Ord Parameter Sa Act Uncert Q S1 AIR HX8161AA TH-230 2.20E+00 (3.84E-01) S1 AIR HX8161AA TH-232 8.25E-01 (2.21E-01) S1 AIR HX8171AA TH-228 1.92E-01 (1.36E-01) U4 S1 AIR HX8171AA TH-230 1.19E-01 (8.45E-02) U4 S1 AIR HX8171AA TH-232 5.95E-02 (5.96E-02) U4 S1 AIR HX8181AA TH-232 5.95E-02 (5.13E-02) U4 S1 AIR HX8181AA TH-230 0.00E+00 (5.82E-02) U4 S1 AIR HX8181AA TH-232 0.00E+00 (5.82E-02) U4 S1 AIR HX8181AA TH-232 0.00E+00 (5.82E-02) U4 S1 AIR H0EP81AA TH-230 9.28E-03 (6.32E-03) U4 S1 AIR H0EP81AA TH-230 9.28E-03 (6.72E-03) U4 S1 AIR H0EP81AA TH-232 0.00E+00 (4.54E-03) U4 S1 AIR H0EP81AC TH-232 5.14E-03 (7.28E-03) U4 S1 AIR H0EP81AC TH-230 1.90E+00 (1.67E-01)	Summary Report Summary Report Sa Act Uncert Q Units	Summary Report Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary Summary	Summary Report Meth Matrix Wrk Ord Parameter Sa Act Uncert Q Units Av ILcC S1 AIR HX8161AA TH-230 2.20E+00 (3.84E-01) PCI/SA R S1 AIR HX8161AA TH-232 8.25E-01 (2.21E-01) PCI/SA R S1 AIR HX8171AA TH-228 1.92E-01 (1.36E-01) U4 PCI/SA R 1.49E-01 S1 AIR HX8171AA TH-230 1.19E-01 (8.45E-02) U4 PCI/SA R 1.49E-01 S1 AIR HX8181AA TH-232 5.95E-02 (5.96E-02) U4 PCI/SA R S1 AIR HX8181AA TH-228 5.11E-02 (5.13E-02) U4 PCI/SA R S1 AIR HX8181AA TH-230 0.00E+00 (5.82E-02) U4 PCI/SA R S1 AIR H0EP81AA TH-228 3.99E-03 (6.32E-03) U4 PCI/SA R 6.10E-03	Summary Report Summ	Summary Report Subleted Subl	Summary Report Summ

RecCnt:68 RADCALC v4.8.18 STL Richland

^{() - (1}s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
'Std - Lc, MDC using StdDev for Set of Blanks

Page 2

Q - Qualifier, U is Less Than Lc = 1.645 TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

	Ва	tch Nbr: 60	60336				A	Alpha	Spe	c, T		o by ALF Detailed			ated F	Result	S		4/15	/2006 7:13:4	19 AN
9	St	itus Method	Matrix	Protocol	Equati	ion Set	Wri	k Ord	Units/M	letrix (3 Sa/On Date	•		t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy	Vol Final/Cou	unt Vo
36	Ca 403	lc S1 ,P 0510	AIR	*STLE		WoBS 1 B270158-1			PCI/SA AIR	1	02	/05/06 06:00	04/12/06	3 20:39			682.55 A	1 Alq	1.00 S 0.08281 S		
s	q	Cnt Date	Paramete	r Samp	ole Cnt	Bkgrnd C	nt	instr	Ģeom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	ingr Fct	Conv Fct/VolAdj	Decay	Abn
)	04	1/12/06 16:29	TH-228	3 499.4	666666	4 5 998.95	Δ	LP171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N	en mer i en messe met i en en i e superiment en en en e	1.0000E+00 (0.000E+00)		1.0683E+00	•
	0	4/12/06 16:29	TH-230	4 499.4	666666	1 998.95	A	LP171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	Q.	4/12/06 16:29	7H-232	0		0 998.95	P	LP171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	0	4/12/06 14:18	3 TH-234	6011 20		640 500	/ (aPC30A	COP	Y Y	N	4.4818E-01 (6.723E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 12.075785	1.0000E+00	
	Sq	Calc Date	Paramete		Şa A		Q	Net C	Ont Rt	•	ı Wo E	3lk Dpm-B	ik V	ol Used		Yield,EnFo	t Chem Yid	I,EFctU IDC/ILct	C BIKLcC/N	ADC StdDvMi	dC/Lc(
		04/13/06	TH-228	R	0.0452		U4	2.0022		0.007		0.007783) (0.01556		1.0	0 Sa 1)	98%		0.419954 0.14878			
		04/13/06	TH-230	R	0.1472	79		7.0074 (4.1275		0.027 (0.01		0.027076) (0.01599		1.0 0 . 02 7 06(0)	0 Sa 4)	98%		0.25239 0.06922	4		
		04/13/06	TH-232	R	0.00E0 (0.051	00	U4	0.0000		0.00		0.00E00 (0.00947	4) (1.0 0.0270 6	00 Sa 4)	98%		0.11403	6		
		04/13/06	TH-234	R	3632.2 (218.6	224478 97412)		2.9927 (3.8769		667. (13.2				1.0 0.02706)	00 Sa 4)	98%					
Şq	S	tatus Method	Matrix	Protoco	ol Equa	tion Set	W	rk Ord	Units/	Matrix	QC/E	B Sa/On Date	Analysis	Date/PptV	Vt Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent	Yld Total/Analy	/ Vol Final/Co	ount V
2 53		alc S1 3,P 0511	AIR	*STLE		oWoBS 6B270158-			PCI/S AIR	A	0	2/05/06 06:35	04/12/0	6 20:39		<u> </u>	684.05	1 Alq	1.00 s 0.083179 s		
. :	Sq	Cnt Date	Paramet	ter Sam	ple Cnt	Bkgrnd	Cnt	Instr	Geom	Trc/A	v Er	nt Efficiency1	Efficiency	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	fj Decay	Ab
0	()4/12/06 16:2	9 TH-228	0	466666	1 6 998.95		ALP172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N	10000000000000000000000000000000000000		4.5045E-01 12.022294	1.0683E+00)
1	()4/12/06 16:2	9 TH-230	0 499.	466666	2 6 998.95		ALP172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N			4.5045E-01 12.022294	1.0000E+00)
2	(04/12/06 16:2	9 TH-232	1		1 6 998.95		ALP172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N			4.5045E-01 12.022294	1.0000E+00)
3	(04/12/06 14:1	8 TH-234	610 20		767 500		GPC30B	COP	Y Y	N	4.5684E-01 (7.492E-03)		N	100%	N		1.0000E+00	4.5045E-01 12.022294	1.0000E+00)
() II S		- (1s Uncertaini - Instrument De - Counts are De	tootion Level is	e Cone He	site Balle	 Mathe 	d Baci	eion I e vel	lin Conc	Units, A	MDC- gits M	Pagi Minimum Detecta ay Not be Signific	ble Concentra	ation ime - mm/i	dd/yy hh:mn	n, 24hr Tim	e	Red	· · · · · ·	RADCALC v4 STL Richland	

Г	Rat	ch Nbr: 606	0336			A	lpha	Spe	c. Th	ilso	by ALP	, Ca	lcula	ited F	esults	3		4/15/2	006 7:13:4	9 AM
i.		Calc Date	Parameter	Avg	Sa Act	Q	Net Cr	-	Dpm W			•	Used				FetU IDC/ILeC	BikLcC/MD0	StdDvMd0	C/LcC
	<u> </u>		TH-228	R	-0.021901 (0.02196)	-	-1.00105 (1.0011E		-0.0037 (0.0037		-0.003786 (0.00379)	(0.	1.00 (027064		97%	•	0.262726 0.072054			
	()4/13/06	TH-230	A	-0.040757 (0.028976)		-2.00210 (1.41571		-0.0075 (0.0053		-0.007526 (0.005334)	(0.	1.00 (027 0 64		97%		0.299973 0.094816			
	(04/13/06	TH-232	R	0.020379 (0.045593)	U4	1.00108 (2.2384)		0.0037		0.003763 (0.008416)	(0.	1.00 (027064)		97%		0.244463 0.067045			
	(04/13/06	TH-234	R	3600.906337 (218.052388)		3.03766 (3.9074)		664.93 (13.85)				1.00 (027 0 64.		97%					
Sq	Stat	tus Method	Matrix F	rotoc	ol Equation Set	Wrl	c Ord	Units/N	iatrix Q	C/BB	Sa/On Date	AnalysisDa	ite/PptWi	Sep1/S	ep2 Date	QC/Tracer \	Vial Mult/EntYl	d Total/Analy V	ol Final/Cou	ınt Vol
3	Cak 403,!	c S1 A	NR '	STLE	: AlpisoWoBS ,J6B270158			PCI/S/	1	02/	/05/06 07:15	04/12/06	20:39			687.30 Al	1	1.00 Sa 0.083825 Sa		:
s	q	Cnt Date	Parameler	San	nple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency!	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04	/12/06 16:29	TH-228	0 499.	0 4666666 998.95		LP173	COP	N Y		2.0829E-01 (6.249E-03)		N	83% 3%	N		1.0000E+00 (0.000E+00)		.0682E+00	
1	04	/12/06 16:29	TH-230	4 499.	0 .4666666 998 .95		LP173	COP	N Y		2.0829E-01 (6.249E-03)		N	83% 3%	N		1.0000E+00 (0.000E+00)		.000E+00	
2	04	/12/06 16:29	TH-232	1	0 .4666666 998.95	A	LP173	COP	N Y		2.0829E-01 (6.249E-03)		N	83% 3%	N		1.0000E+00 (0.000E+00)		.0000E+00	
3	04	/12/06 14:18	TH-234		- 740		SPC30C	COP	Y Y	N	4.4643E-01 (6.696E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	Sq	Calc Date	Parameter	Av		Q	Net C	nt Rt	Dpm '	Wo B	ik Dpm-Bii	c Vo	l Used		Yield,EnFc	t Chem Yid,	EFctU IDC/ILcC	BlkLcC/MI	OC StdDvMd	dC/LcC
		04/13/06	TH-228	R	0.00E00 (0.082043)	U4	0.0000		0.00E (0.014		0.00E00 (0.014293)) (0	1.0 0.02706	0 Sa 1)	83%		0.181538	3		
		04/13/06	TH-230	R	0.249334 (0.12602)		8.0085 (4.0043		0.046 (0.023		0.046399 (0.023302) (0	1.0 0.027064	0 Sa 4)	83%		0.168924	ļ		
		04/13/06	TH-232	R	0.062333 (0.062503)	U4	2.0021		0.011 (0.011		0.0116) (0.011613) ((1.0 0.02706	0 Sa 4)	83%		0.168924	1		
		04/13/06	TH-234	R	3060.496301 (185.035182)		2.5425 (3.576		569.5 (11.7				1.0 0.02706	00 Sa 4)	83%					
Sc	St	atus Method	Matrix	Proto	col Equation Set	W	rk Ord	Units/	Matrix	QC/B	B Sa/On Date	Analysis	ate/PptV	Vt Sep1.	/Sep2 Date	QC/Tracer	Vial Mult/Ent	rid Total/Analy	Vol Final/Co	ount Vol
L		alc S1 3,P 0513	AIR	*STL	E AlpisoWoBS 6B27015,			PCI/S	A	02	2/05/06 07:45	04/12/0	6 20:39			684.05 /	1 Ng	1.00 Sa 0.081995 Sa		
?	Sq	Cnt Date	Paramete	r Sa	mple Cnt Bkgm	d Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
ο		4/12/06 16:29	7H-228	7 499	1 9.4666666 998.9		ALP174	COP	N Y	N	2.0781E-01 (6.234E-03)		N	143% 5%	N		1.0000E+00 (0.000E+00)		1.0682E+00	ı
0 11 8					Result is Less Than Jnits, MLcC - Metho nation of Each Sr-89				Units, Milesult Dig	DC- N	Page dinimum Detectabl ay Not be Significal	e Concentrat	ion ne - mm/c	ld/yy hh:mr	n, 24hr Time	9	Rec		ADCALC v4 TL Richland	

P.0552

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5,50

	Batch Nbr: 606	5 0336			Alpha	Spe	c, T	าไร	o by ALP	, Cal	cula	ted F	Results		aana aanaanan arabii a kad kad kana Pad i i 9 Sira (1944) saara dar ii saara	4/1	5/2006 7:13:5	50 AM
	04/12/06 16:29		26 499,4666666	998.95	ALP174	•	N Y	N :	2.0781E-01 (6.234E-03)	٨	1	143% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/12/06 16:29	TH-232	7 499.4666666	0	ALP174	COP	N Y		2.0781E-01 (6.234E-03)	1	١	143% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
4	04/12/06 14:18	TH-234	8727	614 / 500	GPC30D	COP	Y Y		4.4610E-01 (6.691E-03)	1	N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
ş	Sq Calc Date	Parameter	Avg Sa A		Q Net C	nt Rt	Dpm	Wo B	lk Dpm-Blk	Vol U	sed		Yield,EnFct	Chem Yld	I,EFctU IDC/ILcC	BikL¢C	/MDC StdDvMd	dC/LcC
	04/13/06	TH-228	R 0.3697		1.30139 (5.3909		0.063		0.063001 (0.02626)	(0.02	1.00 : 27064)	Sa	143%		0.341158 0.093564			
	04/13/06	TH-230	R 1.37610 (0.2881	08	5.20555 (1.0209		0.250 (0.050		0.250491 (0.050474)	(0.0)	1.003 (27064	Sa	143%		0,143433			
	04/13/06	TH-232	R 0.3704	91	1.40149 (5.2972		0.067 (0.02		0.06744 (0.02568)	(0.0)	1.00 27064)		143%		0.143433			
	04/13/06	TH-234	R 5358.4	47032	4.35122 (4.6712		975.3 (17.99		·	(0.0)	1.00 27064)		143%)				
Sq	Status Method	Matrix F	rotocol Equal		Wrk Ord	Units/	Matrix	QC/BI	B Sa/On Date	AnalysisDate	/PptWt	Sep1	/Sep2 Date	QC/Trace	er Vial Mult/EntY	'ld Total/Ana	aly Vol Final/Co	ount Vo
	Calc S1 /	AIR	STLE Alpiso	WoBS H		PCI/S	A	02	2/05/06 08:15	04/12/06 2	0:39		180,0147	623.26	1 Alq	1.00 0.083925		
	q Cnt Date	Parameter	Sample Crit			Geom	Trc/Av	Ent	t Efficiency1 E	fficiency 2	Ent	Yld Fct	Ent l	Bik Value	Ingr Fct	Conv Fct/Vol.	Ad] Decay	Abn
0	04/12/06 16:29		499.466666	2 009 05	ALP175	COP	N Y	N	2.6497E-01 (7.949E-03)		N	103% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.915402	1.0682E+00	0
1	04/12/06 16:29	TH-230	15 499,466666	1	ALP175	COP	N Y	N	2.6497E-01 (7.949E-03)		N	103% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.915402	1.0000E+00	0
2	04/12/06 16:29	TH-232	4 499,466666	1	ALP175	COP	N Y	N	2.6497E-01 (7.949E-03)		N	103% 4%	N		1.0000E+00 (0.000E+00)	4.5045 E-0 1 11.915402	1.0000E+00	0
3	04/14/06 22:02	TH-234	5777	669	GPC30A		Y		4.4818E-01	سمر الم	N ana	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.915402	1.0000E+00	0 .
	Sq Calc Date	Parameter	20 Avg Sa		المنافعة الم	ယ လွှဲင Cnt Rt		Wo l	(6.723E-03) Sol COP L Blk Dpm-Blk	Voll		1,7000		t Chem Y	ld,EFctU IDC/ILc	C BIKLC	C/MDC StdDvN	MdC/Lc(
	04/15/06	TH-228	R 0.1307	748	U4 6.0064	14E-03	0.02	2805	0.022805		1.00) Sa	103%	-	0.32076			
			(0.092	953)	(4.247	•	(0.01	6161) (0.016161)	(0.0)27064)	,			0.10138			
	04/15/06	TH-230	R 0.5886 (0.164		2.9031 (7.818		0.109 (0.02		0.109563 (0.029951)	(0.0	1.00 (27064)		103%		0.24325 0.06671			
	04/15/06	TH-232	R 0.1419			\$ 9E-03 '5E-03)				(0.0)	1.00 027064	0 Sa -)	103%		0.24325 0.06671			
	04/15/06	TH-234	R 3443.	•		12E+02 7E+00					1.00 027064	0 Sa ()	103%					
L				·					Page 3					h	Red	Cnt:6	RADCALC V4	4.8.18
	- (1s Uncertainiti																	

8.051u

q S		60336		Faration Cat	Wrk C	pha :			7/00	Sa/On Date	ΔnalveisDa	te/PntWt	Sep1/S	Sep2 Date	QC/Tracer	Vial Mult/EntY	'id Total/Analy	Vol Final/Cou	ınt V
	Status Method			Equation Set				IIIX Q								1	1.00 S		
	Dalc S1 / 03,P 0515	AIR '	'STLE A	AlpisoWoBS J68270158			PCI/SA Air		02/0	05/06 08:40	04/12/06	20:39			684.55 A		0.083458 S		
Sa		Parameter	Sample	Cnt Bkgrnd	Cnt In	str (Geom T	rc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Al
	04/12/06 16:29	TH-228	0 /			P176 C		N Y		2.6767E-01 (8.030E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11,982061	1.0682E+00	
	04/12/06 16:29	TH-230	499.466	66666 998.95 1		P176 (N 2	2.6767E-01		N	98%	N			4.5045E-01	1.0000E+00	
	04/12/06 16:29) TH-232	499.466 0	66666 998.95 1		.P176 (COP	Y N		(8.030E-03) 2.6767E-01		N	4% 98%	N		1.0000E+00	4.5045E-01	1.0000E+00	
	04/12/00 10.25	111-252		66666 998.95		, .		Υ	((8.030E-03)			4%			(0.000E+00)			
	04/12/06 14:43	3 TH-234	6152 20	767 - 500	GF	°C30B (COP	Y Y		4.5684E-01 (7.492E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
S	c Calc Date	Parameter	20	Sa Act	Q	Net Cr	nt At	Dpm \			k Vo	l Used		Yleid,EnFo	t Chem Yld	,EFctU IDC/ILc	C BikLcC/N	iDC StdDvMc	4C/
	04/13/06	TH-228		0.022164 0.022224)		-1.00105 (1.00116		-0.003 (0.003		-0.003844 (0.003849		1.0	0 Sa ()	98%		0.26588 0.07292		-	
	04/13/06	TH-230	R 0	0.085707)		7.00749 (4.1275)		0.0267 (0.015		0.02675 (0.015807	r) (c	1.0 0.0270 6 4	0 Sa 1)	98%		0.24742 0.06785			
	04/13/06	TH-232	R -(0.020625	U4	-1.0010	5 E -03	-0.003 (0.003	821	-0.003821		1.0 0.027064	0 Sa 1)	98%		0.24742 0.06785			
	04/13/06	TH-234	FI 3	(0.020681) 3616.029252 (218.930826)		3.06066	5E+02	669.96 (13.94	5762	5 669.9676	25		0 Sa	98%					
	Status Method	Matrix		Equation Set		Ord				B Sa/On Date	Analysis	ate/PptV	/t Sep1/	Sep2 Date	QC/Trace	r Vial Mult/Ent	tYld Total/Anal	/Vol Final/Co	oun
	Calc S1	AIR	*STLE	AlpisoWoBS			PCI/SA	\	02	2/05/06 06:10	04/12/0	3 20:39	<u> </u>		684.05	1 Alq	1.00 S		
_				•	m-/ V4 6 1														
	403,P 0516	Deremate	r Samol	,J6B27015			Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	! Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolA	d] Decay	
	q Cnt Date 04/12/06 16:2	Paramete	0 -	"J6B27015 ole Cnt Bkgrnd O	d Cnt I	Instr	Geom	N	N	2.1725E-01	Efficiency 2	2 Ent N	Yld Fct 99% 4%	Ent N	Blk Value	1.0000E+00	4.5045E-01	1.0683E+00)
	q Cnt Date	9 TH-228	0 499.46 2	,J6B27015 ble Cnt Bkgrn 0 666666 998.9 0	Al Al	Instr	COP	N Y N	N	2.1725E-01 (6.517E-03) 2.1725E-01	Efficiency 2		99%		Blk Value	1.0000E+00 (0.000E+00 1.0000E+00			
	q Cnt Date 04/12/06 16:2	9 TH-228	0 499.46 2 499.46 0	,J6B27015i ole Cnt Bkgrni 0 666666 998.9 0 666666 998.9	All All All All All All All All All All	Instr LP177	COP	N Y N Y	N	2.1725E-01 (6.517E-03) 2.1725E-01 (6.517E-03) 2.1725E-01	Efficiency 2	N	99% 4% 99%	N	Blk Value	1.0000E+00 (0.000E+00 1.0000E+00 (0.000E+00	0 4.5045E-01 11.989485 0 4.5045E-01	1.0683E+00)
	q Cnt Date 04/12/06 16:2 04/12/06 16:2	29 TH-228 29 TH-230 29 TH-232	0 499.46 2 499.46 0 499.46 6052	,J6B27015i ole Cnt Bkgrni 0 666666 998.9 0 666666 998.9 746	95 A	Instr LP177 LP177	COP COP	N Y N Y	N N N	2.1725E-01 (6.517E-03) 2.1725E-01 (6.517E-03)	Efficiency 2	N N	99% 4% 99% 4% 99%	N N N	Blk Value	1.0000E+00 (0.000E+00 1.0000E+00 (0.000E+00 1.0000E+00 (0.000E+00	0 4.5045E-01 11.989485 0 4.5045E-01 0 11.989485 0 4.5045E-01	1.0683E+00 1.0000E+00 1.0000E+00)
	q Cnt Date 04/12/06 16:2 04/12/06 16:2 04/12/06 16:2	29 TH-228 29 TH-230 29 TH-232	0 499.46 2 499.46 0 499.46	,J6B27015 ble Cnt Bkgrn 0 666666 998.9 0 666666 998.9	95 A	LP177 LP177 LP177	COP COP	N Y N Y N Y	N N N	2.1725E-01 (6.517E-03) 2.1725E-01 (6.517E-03) 2.1725E-01 (6.517E-03) 4.4643E-01	Efficiency 2	N N N	99% 4% 99% 4% 99% 4%	N N N	Bik Value	1.0000E+00 (0.000E+00 1.0000E+00 (0.000E+00 1.0000E+00 (0.000E+00	0 4.5045E-01 11.989485 0 4.5045E-01 11.989485 0 4.5045E-01 0 11.989485 0 4.5045E-01	1.0683E+00 1.0000E+00 1.0000E+00)

Batch Nbr: 6060336

Parameter

Sq Calc Date

1	- 1			_																	
		04/13/06	TH-228	R	0.00E00 (0.06644		U4	0.0000.0		0.00E0 (0.011		0.00E00 (0.011516)) ((1,00 (0,027064)		99%		0.147017			
		04/13/06	TH-230	R	0.10095		U4	4.00427 (2.8314		0.0186		0.018693 (0.013247)) ((1.00 (0.027064)		99%		0.136795			
		04/13/06	TH-232	R	0.00E00 (0.06182)	Ų4	0.00000		0.00E0 (0.011		0.00E00 (0.011447)) ((1.00 (0.027064		99%		0.136795			
		04/13/06	TH-234	R	3642.63 (219.29)	8179		3.01108		674.47 (13.35				1.00 0.027064		99%					
S	q St	atus Method	Matrix F	rotoco	i Equation		Wrl	k Ord	Units/M	atrix C	C/BE	3 Sa/On Date	Analysis[ate/PptWi	t Sep1/S	ep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy	Vol Final/Cou	unt Vol
5	Ca 36403	ic S1 A	AIR .	*STLE	Aipiso\	WoBS 3270158-			PCI/SA	<u> </u>	02	/05/06 06:15	04/12/0	6 20:39			683.30 A	1 Mg	1.00 S 0.083747 S		
	Sq	Cnt Date	Parameter	Sam	ple Cnt	Bkgrnd (≘nt	Instr	Geom	Trc/Av	Ent	Ffficiency1	Efficiency 2	2 Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
Č	04	4/12/06 16:29	TH-228	0 499.	4666666	1 998.95	Δ	LP178	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0683E+00	
.	0-	4/12/06 16:29	TH-230	3 499	4666666	0 998.95	A	LP178	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	. 0	4/12/06 16:29	TH-232	1	4666666	1		LP178	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3 %	N		1.0000E+00 (0.000E+00)		1.0000E+00	
į	0	4/12/06 14:43	TH-234	580		614 500		SPC30D	COP	Y	N	4.4610E-01 (6.691E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.940792	1.0000E+00	
-	Sq	Calc Date	Parameter		g Sa A		Q	Net (Ont Rt	Dpm	Wo E	3lk Dpm-Bi	ik V	ol Used	,	Yleld,EnFo	t Chem Yld	,EFctU IDC/ILc(C BikLcC/N	MDC StdDvMd	dC/LcC
		04/13/06	TH-228	R	-0.0208 (0.0209		U4	-1.0010 (1.001		-0.003				1.0 0.027064	0 Sa 4)	95%		0.250083 0.068586			
		04/13/06	TH-230	R	0.1163	86		6.0064		0.021 (0.01		0.021638) (0.012534		1.0 0.02 7 06/	0 Sa 4)	95%		0.105136	3		
		04/13/06	TH-232	R	0.0193	98	U4	1.0010		0.003		0.003606 (0.008066		1.0 0.027064	00 Sa 4)	95%		0.232696 0.063818	_		
		04/13/06	TH-234	R	•	10149			2E+02 5E+00)	648.1 (12.9				1.0 0.027064	90 Sa 4)	95%					
	Sq S	tatus Method	Matrix	Protoc	ol Equat		W	rk Ord	Units/i	Aatrix	QC/B	B Sa/On Date	Analysis	Date/PptV	Vt Sep1/	Sep2 Date	QC/Trace	r Vial Mult/Ent	Yid Total/Analy	/Vol Final/Co	ount Vol
į		alc S1 3,000357	AIR	*STL	E Alpiso	WoBS 6B270158			PCI/S	A	0	2/05/06 06:05	04/12/0	06 20:39		, <u>, , , , , , , , , , , , , , , , , , </u>	684.55	1 Alq	1.00 S 0.08283 S		
	Sq	Cnt Date	Paramete	r Sar	mple Cnt	Bkgrnd	Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency	2 Ent	Yid Fct	Ent	Bik Value	ingr Fct	Conv Fct/VolAc	ij Decay	Abn
X	·)4/12/06 16:29	·	3	0.0333333	0 -		ALP113	COP	N Y	N	2.5291E-01 (7.587E-03)		N	99% 4%	N			4.5045E-01 12.072857	1.0683E+00	ŀ
												Page	5			······································		Rec	Cnt:9	RADCALC v4.	.8.18
	100	(1s Uncertainiti Instrument Dete Counts are Det	Antion Lauratin A	Concil	mite AAI of	C - Matha	d Decis	DOVA LANK	in Conc I	Jnits, M esult Dig	DC- N its Ma	rage Minimum Detectab ay Not be Significa	le Concentra	ition me - mm/d	id/yy hh:mm	n, 24hr Tim	e	, 160	·····	STL Richland	
1																					

, Calculated Results

Vol Used

Yield,EnFct Chem Yld,EFctU IDC/ILcC

4/15/2006 7:13:50 AM

BIKLcC/MDC StdDvMdC/LcC

Alpha Spec, Thiso by ALP

Net Cnt Rt

Sa Act

Dpm Wo Blk

Dpm-Blk

00,35¢

4/15/2006 7:13:50 AM

1 '	Status Method	Matrix	Protoco	l Equati	on Set	Wrk O			***************************************		D by ALP Sa/On Date				Sep2 Date		Vial Mult/EntY	Id Total/Analy	Vol Final/Cou	ınt
11 (Calc S1 103,000359	AIR	*STLE		WoBS B270168-1			PCI/SA AIR	·····	02/	05/06 07:20	04/12/06	20:40		- Magazille karlande - Alle de de en ende en en en	688.54	1 Ng	1.00 S 0.084039 S		
Sq	Cnt Date	Paramete	r Samı	ple Cnt	Bkgrnd C	nt Ins	tr (Geom T	rc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	i
o	04/12/06 16:30) TH-228	-	/ 8166666	4 1000.13		116 C	ОР	N Y		2.0433E-01 (6.130E-03)		N	95% 3%	N	unt har har har har har har har har har har	1.0000E+00 (0.000E+00)		1.0682E+00	
1	04/12/06 16:3	TH-230	9		1 1000.13	ALF	116 C	ОР			2.0433E-01 (6.130E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/12/06 16:3) TH-232	0		0 1000.13	ALF	116 C	COP		N :	2.0433E-01 (6.130E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
3	04/12/06 15:0	7 TH-234	5894		746		C30 C C	COP	Y	N ·	4.4643E-01 (6.696E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
9	Sq Calc Date	Parameter	20 r Avg	Sa A	500 .ct	Q	Net Cn	ıt Rt	Y Dpm V			k Vo	ol Used		Yleid,EnFo	t Chem Yld	(0.000 2. +00)		IDC StdDvMc	JC
	04/13/06	TH-228		0.0590			.996741 3.9980E		0.0103 (0.0206		0.010306 (0.020642) (1.00 0.027064		95%	***	0.548625 0.194388			_
	04/13/06	TH-230	R	0.46719	92		.69887E		0.0871 (0.031		0.087163 (0.031455) (1.00 0.027064) Sa	95%		0.32973 0.090441	1		
	04/13/06	TH-232	R	0.00E0 (0.0673			100000. 100000.		0.00E0 (0.012!		0.00E00 (0.012559) (1,00 0.027064) Sa)	95%		0.148956	3		
	04/13/06	TH-234	R	3520.3 (212.06			.932081 3.8390 E		656.78 (13.076			_,	1.00 0.027064		95%					
-	54-4 M-4										. ,									u
Sq	Status Method	Matrix	Protoco	ol Equat	ion Set	Wrk (Ord	Units/Ma	ntrix Q	C/BE	Sa/On Date	Analysisi	Date/PptW	t Sept	/Sep2 Date	QC/Trace	r Vial Mult/Ent\	Yid Total/Analy	Vol Final/Co	
12	Calc S1 403,000360	Matrix		Alpiso	ion Set WoBS B270158-	HX8151	AA	Units/Ma PCI/SA AIR	ntrix Q			AnalysisI 04/12/0		t Sept.	/Sep2 Date	QC/Trace 685.55	1	1.00 S 0.083782 S	Sa	
12	Calc S1 403,000360		*STLE	Aipiso ,J6	WoBS	HX8151 12 v4.8.1	AA 8	PCI/SA AIR		02	Sa/On Date		6 20:40	t Sep1	Market and another and		1	1.00 \$	sa Sa	
12 5364 Sc	Calc S1 403,000360	AIR Paramete	*STLE er Sam 15	Alpiso ,Je iple Cnt	WoBS 6B270158-	HX8151 12 v4.8.1 Cnt in:	AA 8 str	PCI/SA AIR		02. Ent	3 Sa/On Date /05/06 07:50	04/12/0	6 20:40	elle desteurement en 1908	Market and another and	685.55	1 Aiq Ingr Fct	1.00 S 0.083782 S Conv Fct/VolAd 4.5045E-01	sa Sa	
12 5364 Sc	Calc S1 403,000360 q Cnt Date	Paramete 0 TH-228	*STLE er Sam 15 500.	Alpiso ,Je uple Cnt 1166666	WoBS 6B270158- Bkgrnd (HX8151 12 v4.8.1 Cnt in: ALI 333	AA 8 str	PCI/SA AIR Geom COP	Trc/Av N	02. Ent N	8 Sa/On Date /05/06 07:50 Efficiency1 2.6295E-01	04/12/0	6 20:40 2 Ent	Yld Fct 95%	Ent	685.55	1 Alq Ingr Fct 1.0000E+00 (0.000E+00)	1.00 S 0.083782 S Conv Fct/VolAd 4.5045E-01 11.935713 4.5045E-01	Sa Sa j Decay	
12 5364 Sc	Catc S1 403,000360 q Cnt Date 04/12/06 16:3	Paramete 0 TH-228 0 TH-230	*STLE 15 500. 74 500.	Alpiso ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	WoBS 6B270158- 9kgrnd (0 3 2500.03 1 3 2500.03	HX8151 12 v4.8.1 Cnt in: ALI 333 ALI 333 ALI	AA 8 str 2117 (PCI/SA AIR Geom COP	Trc/Av N Y N	O2. Ent N N	8 Sa/On Date /05/06 07:50 Efficiency1 2.6295E-01 (7.889E-03) 2.6295E-01	04/12/0	6 20:40 2 Ent N	Yld Fct 95% 3% 95%	Ent N	685.55	1 Aiq Ingr Fct 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	1.00 S 0.083782 S Conv Fct/VolAd 4.5045E-01 11.935713 4.5045E-01 11.935713	Sa Sa j Decay 1.0682E+00	
12 5364 Sc 0	Catc S1 403,000360 q Cnt Date 04/12/06 16:3	Paramete 0 TH-228 0 TH-230 0 TH-232	*STLE 15 500. 74 500.	Alpiso, ,J6 iple Cnt 1166666	9WoBS 5B270158- Bkgrnd (0 2500.03 1 3 2500.03	HX8151 12 v4.8.1 Cnt In: ALI 3333 ALI 3333 ALI 3333	AA 8	PCI/SA AIR Geom COP COP	Trc/Av N Y N Y	O2. Ent N N N	Efficiency1 2.6295E-01 (7.889E-03) 2.6295E-01 (7.889E-03)	04/12/0	6 20:40 2 Ent N	Yld Fct 95% 3% 95% 3%	Ent N N	685.55	1 Alq Ingr Fet 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	1.00 S 0.083782 S Conv Fct/VolAd 4.5045E-01 11.935713 4.5045E-01 11.935713 4.5045E-01 11.935713	5a 5a j Decay 1.0682E+00 1.0000E+00	ı
12 5364 Sc 0	Catc S1 403,000360 q Cnt Date 04/12/06 16:3 04/12/06 16:3	Paramete 0 TH-228 0 TH-230 0 TH-232 7 TH-234	*STLE 15 500. 74 500. 14 500. 5853 20	Alpiso ,JE ,JE	WoBS 6B270158- 9kgrnd (0 3 2500.03 1 3 2500.03 0 3 2500.03 614 _ 500	HX8151 12 v4.8.1 12 v4.8.1 3333 ALI 3333 ALI 3333 GP	AA 8 P117 (P117 (C30D (PCI/SA AIR Geom COP COP	Trc/Av N Y N Y N Y Y Y Y	O2. Ent N N N	Efficiency1 2.6295E-01 (7.889E-03) 2.6295E-01 (7.889E-03) 4.4610E-01	04/12/0	6 20:40 2 Ent N N	95% 3% 95% 3% 95% 3%	Ent N N	685.55	1 Aiq Ingr Fet 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	1.00 S 0.083782 S Conv Fct/VolAd 4.5045E-01 11.935713 4.5045E-01 11.935713 4.5045E-01 11.935713 4.5045E-01 11.935713	Sa Sa j Decay 1.0682E+00 1.0000E+00	•

	Ba	atch Nbr: 60	60336				Alpha	Spe	c, T	hls	o by ALF	, C	alcula	ated	Result	S		4/15	5/2006 7:13:5	51 AM
L	Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net 0	ont Rt	Dpm	Wo B	lk Dpm-8ii	. Vo	Used		Yield,EnFc	t Chem Yld,	EFetU IDC/ILe		DC StdDvMd	
		04/13/06	TH-228		0.691604 (0.185701)		2.9993 (7.7442		0.120		0.120423 (0.031601)) (0	1.00		95%		0.12495			
		04/13/06	TH-230		3.166322 (0.436723)		1.4756 (1.7208		0.588 (0.074		0.588925 (0.074007)	(0	1.00 (0.027064)		95%		0.205501 0.044642			
		04/13/06	TH-232	R	0.600658 (0.166522)		2.7993 (7.4816		0.111		0.11172 (0.030314)) (0	1.00 (0.027064)		95%		0.11627			
		04/13/06	TH-234		3512.247148 (211.604935		2.9142 (3.8256		653.2 (13.02			4	1.00 1.027064)	Sa	95%					
S	q St	atus Method	Metrix		Equation Se		/rk Ord	Units/IV	latrix (C/BE	3 Sa/On Date	AnalysisD			/Sep2 Date	QC/Tracer	Vial Mult/Ent\	fid Total/Analy	Vol Final/Cou	unt Vol
	3 Ca 36403	alc S1 ,000361	AIR	*STLE	AlpisoWoB ,J6B270			PCI/S/ AIR	1	02	/05/06 08:20	04/12/06	20:40		- E	685.05 A	1	1.00 S 0.082848 S		
	Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgr	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04	4/12/06 16:30	TH-228	10 500.0	1 05 100		ALP119	COP	N Y	N	2.0125E-01 (6.037E-03)		N	98% 4%	N	MATERIAL PROPERTY AND AN ARCHITECTURE	1.0000E+00 (0.000E+00)		1.0682E+00	
1	04	4/12/06 16:30	TH-230	40 500.0	0 05 100)	ALP119	COP	N Y	N	2.0125E-01 (6.037E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 12.070287	1.0000E+00	
2	04	4/12/06 16:30	TH-232	15 500.0	0 05 100)	ALP119	COP	N Y	N	2.0125E-01 (6.037E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04	4/1 <i>2</i> /06 15:29	TH-234	6059 20	/ 640 500	1	GPC30A	COP	Y Y		4.4818E-01 (6.723E-03)		N	100%	N			4.5045E-01	1.0000E+00	
	Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net (Ont Rt	Dpm	Wo B	lk Dpm-Bli	c Ve	l U s ed		Yield,EnFc	t Chem Yld,i	EFctU IDC/ILc(IDC StdDvMd	IC/LcC
		04/13/06	TH-228	R	0.561361 (0.193649)		1.8998 (6.402		0.096 (0.032		0.096657 (0. 0328 87)) (0	1.00 0.027064		98%		0.35444 0.097209	9		.,
		04/13/06	TH-230	Ŗ	2.199492 (0.383645)		7.9992 (1.2648		0.404 (0.066		0.404537 (0.066707)) (d	1.00 (0.027064)		98%		0.149016	3		
		04/13/06	TH-232	R	0.824809 (0.221459)		2.9997 (7.7452		0.151 (0.039		0.151701 (0.039808)) (C	1.00 (027064)		98%		0.149016	6		
		04/13/06	TH-234	R	3659.686121 (220.310104		3.0167 (3.892)		673.1 (13.31				1.00 0.027064)		98%					
S	q St	atus Method	Matrix	Protoco	l Equation Se	t W	/rk Ord	Units/M	latrix (C/BE	3 Sa/On Date	AnalysisD	ate/PptWt	Sep1	/Sep2 Date	QC/Tracer	Vial Mult/Ent\	fld Total/Analy	Vol Final/Cou	unt Vol
1	4 Ca 36403	alc S1 ,000362	AIR	*STLE	AlpisoWoB			PCI/SA	\	02	/05/06 08:45	04/12/06	20:41			682.80 A	1	1,00 S 0.083106 S		**************************************
	Sq	Cnt Date	Parameter	Sam	pie Cnt Bkgr	nd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj		Abn
0	04	4/12/06 16:31	TH-228	4 500.1	2 1666666 100		ALP120	COP	N Y		1.9421E-01 (5.826E-03)		N	94% 3%	N		1.0000E+00 (0.000E+00)		1.0682E+00	
OES	DC -1	Instrument Dete	es), Q - Qualifie ection Level in C ived from the C	onc Uni	ts. MLcC - Met	nod Deci	ision Level i	in Conc U	nits, ME sult Digit	C- Mi	Page 8 inimum Detectable Not be Significan	Concentratio	on e - mm/dd.	vy hh:mn	n. 24hr Time	rlad t kananada kananada a saraha mananana sa sa sa sa s	Reco		ADCALC v4.8 TL Richland	3.18



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	В	atch Nbr: 606	50336		/		Alpha	Spe	c, T	hls	o by ALP	, Calcul	ated I	Results	Antonio Permina Maria Antonio Permina de mantera que en este estador garagamento	n (ala selega <u>) di mangangga</u>	4/15/	2006 7:13:5	1 AM
1	C	4/12/06 16:31	TH-230	2 500.1	0 666666 1000.0		ALP120	COP	N Y	N	1.9421E-01 (5.826E-03)	N	94% 3%	N		+00 4.5045 +00) 12.0328		.00 00E+ 00	
2	(04/12/06 16:31	TH-232	1 500.1	0 666666 1000.0		ALP120	COP	N Y		1.9421E-01 (5.826E-03)	N	94% 3%	N		+00 4.5045 +00) 12.0328		.0000E+00	
3	()4/12/06 15:29	TH-234	5885 20	767 500	/ '	GPC30B	COP	Y Y	N	4.5684E-01 (7.492E-03)	N	100%	N		+00 4.5045 +00) 12.032		.0000E+00	
	Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm	Wo B	ik Dpm-Blk	Vol Used		Yield,EnFct	Chem Yld,EFctU IDO	C/ILcC B	ikLcC/ME	C StdDvMd0	C/LcC
		04/13/06	TH-228		0.191675 (0.136291)	U4	5.99747 (4.2414		0.033		0.033106 (0.023465)	1.0 (0.027 0 64	0 Sa I)	94%	0.47 0.14	0325 867			
		04/13/06	TH-230		0.118922 (0.08455)	U4	3,99867 (2.8275		0.021 (0.01		0.02194 (0.015549)	1.0 (0.027064	0 Sa I)	94%	0.16	31139			
		04/13/06	TH-232	R	0.059461 (0.059623)	U4	1.9993 (1.9993		0.010		0.01097 (0.010983)	1.0 (0.027064	0 Sa I)	94%	0.16	51139			
		04/13/06	TH-234		3472.968385 (210.485144)		2.9271 (3.8361		640.7 (13.4				0 Sa \$)	94%					
ķ	Sq S	Status Method	Matrix F	rotoco	Equation Set	W	rk Ord	Units/N	/atrix	QC/B	B Sa/On Date	AnalysisDate/PptW	t Sep1	/Sep2 Date	QC/Tracer Vial Mul	t∕EntYld Tot	al/Analy \	/ol Final/Cou	ınt Vo
- 1		Calc S1 A	\IR '	*STLE	AlpisoWoBS ,J6B27015			PCI/S/ AIR	Α	02	2/05/06 06:45	04/13/06 10:42		1.011.011.01.0	1 684.30 Alq	0.08	1.00 Sa 33252 Sa		
	Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrno	d Cnt	instr	Geom	Trc/Av	/ Ent	t Efficiency1 E	fficiency 2 Ent	Yid Fct	Ent E	Bik Value Ingr Fo	t Conv Fo	ct/VolAdj	Decay	Abn
Č)										A - AA - E A -		222	•••				1 0000E.00	
- 1		04/13/06 06:32	TH-228	1 500.1	0 833333 1000.		ALP113	COP	N Y	N	2.5291E-01 (7.587E-03)	N	90% 3%	N	1.0000E (0.000E	E+00 4.5045 (+00) 12.011		1.0689E+00	
1	1	04/13/06 06:32		500.1 0	_	1	ALP113					N N		N N	(0.000E 1.0000E		754 5E-01	1.0000E+00	
			TH-230	500.1 0 500.1	833333 1000. 0 833333 1000. 0	1		СОР	Y	N	(7.587E-03) 2.5291E-01		3% 90%		(0.000E 1.000E (0.000E 1.000E	(+00) 12.011 E+00 4 .5045	754 5E-01 754 5E-01		
2	2	04/13/06 06:32	TH-230 TH-232	500.1 0 500.1 0 500.1 5526	833333 1000. 0 833333 1000. 0 833333 1000. 746	1	ALP113	СОР	Y N Y	N N	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01	N	3% 90% 3% 90%	N N	(0.000E 1.0000E (0.000E 1.0000E 1.0000E	(+00) 12.011 (+00) 4.5045 (+00) 12.011 (+00) 4.5045	754 5E-01 1754 5E-01 1754	1.0000E+00	
2	2	04/13/06 06:32 04/13/06 06:32	TH-230 TH-232	500.1 0 500.1 0 500.1 5526	833333 1000. 0 833333 1000. 0 833333 1000.	1 1 1	ALP113 ALP113 GPC30C	СОР	Y N Y N Y Y Y Y	N N	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03)	N	3% 90% 3% 90% 3%	N N	(0.000E 1.0000E (0.000E 1.0000E 1.0000E	E+00) 12.011 E+00 4.5045 E+00 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011	754 5E-01 754 5E-01 1754 5E-01	1.0000E+00 1.0000E+00	å C/ LeQ
2	2	04/13/06 06:32 04/13/06 06:32 04/12/06 15:29	TH-230 TH-232 TH-234	500.1 0 500.1 0 500.1 5526 20 Avg	833333 1000. 0 833333 1000. 0 8333333 1000. 746 500	1 1 1 2	ALP113 ALP113 GPC30C	COP COP COP Cot Rt 27E-03	Y N Y N Y Y T O.0008	N N N	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) 3lk	N N N Voi Used	3% 90% 3% 90% 3% 100%	N N	(0.000E 1.0000E (0.000E 1.0000E (0.000E 1.0000E (0.000E Chem Yld,EFctU_ID	E+00) 12.011 E+00 4.5045 E+00 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011	754 5E-01 754 5E-01 1754 5E-01	1.0000E+00 1.0000E+00 1.0000E+00	iC/LeQ
2	2	04/13/06 06:32 04/13/06 06:32 04/12/06 15:29	TH-230 TH-232 TH-234 Parameter	500.1 0 500.1 0 500.1 5526 20 Avg	833333 1000. 0 833333 1000. 0 833333 1000. 746 500 Sa Act	1 1 1 Q U4	ALP113 ALP113 GPC30C Net 0 1 1.9992 (1.9993	COP COP COP Cont Rt 27E-03 3E-03)	Y N Y N Y Y T O.0008	N N N 1 Wo I 8841 08851	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Bik	N N N Vol Used 1.0 (0.02706	3% 90% 3% 90% 3% 100% 00 Sa 4)	N N N Yield,EnFct	(0.000E 1.0000E (0.000E 1.0000E (0.000E 1.0000E (0.000E Chem Yld,EFctU ID	E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 C///LcC	754 5E-01 754 5E-01 1754 5E-01	1.0000E+00 1.0000E+00 1.0000E+00	iC/LeO
1 2	2	04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 Calc Date 04/13/06	TH-230 TH-232 TH-234 Parameter TH-228	500.1 0 500.1 0 500.1 5526 20 Avg	833333 1000. 0 833333 1000. 0 833333 1000. 746 500 Sa Act 0.051129 (0.051268) 0.00E00	1 1 1 Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	ALP113 ALP113 GPC30C Net 0 1 1.9992 (1.9993 0.0000 (0.0000 4 0.0000	COP COP Cont Rt 27E-03 3E-03) 00E+00 0E+00)	Y N Y N Y Y Dpm 0.003 (0.00) (0.01) 0.000	N N N 1 We I 8841 08851 E00	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Bik Dpm-Bik 0.008841) (0.008851) 0.00E00) (0.010763) 0.00E00	N N N Vol Used 1.0 (0.02706 1.0 (0.02706	3% 90% 3% 90% 3% 100% 00 Sa 4) 00 Sa 4)	N N N Yield,EnFct	(0.000E 1.0000E (0.000E 1.0000E (0.000E 1.0000E (0.000E Chem Yld,EFctU ID	E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 C/(LcC 1	754 5E-01 754 5E-01 1754 5E-01	1.0000E+00 1.0000E+00 1.0000E+00	dC/LeC
2	2	04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 Q Calc Date 04/13/06 04/13/06	TH-230 TH-232 TH-234 Parameter TH-228 TH-230	500.1 0 500.1 0 500.1 5526 20 Avg	833333 1000. 0 833333 1000. 0 833333 1000. 746 500 Sa Act 0.051129 (0.051268) 0.00E00 (0.058234) 0.00E00	1 1 1 Q U4 U4	ALP113 ALP113 GPC30C Net 0 1 1.9992 (1.9993 1 0.0000 (0.0000 4 0.0000 2.7480	COP COP COP Cnt Rt 27E-03 3E-03) 00E+00 00E+00)	Y N Y N Y Y Dpm 0.000 (0.001 0.001) (0.01 615.8	N N N 1 Wo E 8841 18851 E00 10763 E00 10763	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Bik	N N N Vol Used 1.0 (0.02706 1.0 (0.02706 1.1	3% 90% 3% 90% 3% 100% 00 Sa 4) 00 Sa 4) 00 Sa 4) 00 Sa	N N N Yield,EnFct 90%	(0.000E 1.0000E (0.000E 1.0000E (0.000E 1.0000E (0.000E Chem Yld,EFctU ID	E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 C/iLcC 0	754 5E-01 754 5E-01 1754 5E-01	1.0000E+00 1.0000E+00 1.0000E+00	iC/L eQ
14 17	2 3 So	04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 Q Calc Date 04/13/06 04/13/06 04/13/06	TH-230 TH-232 TH-234 Parameter TH-228 TH-230 TH-232 TH-232 TH-234	500.1 0 500.1 0 500.1 5526 20 Avg	833333 1000. 0 833333 1000. 0 833333 1000. 746 500 Sa Act 0.051129 (0.051268) 0.00E00 (0.058234) 0.00E00 (0.058234) 3330.650062 (200.958275)	1 1 1 Q U4 U4	ALP113 ALP113 GPC30C Net 0 1 1.9992 (1.9993 1 0.0000 (0.0000 2.7480 (3.717)	COP COP COP COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt COP Cont Rt Cop Cont Rt Cop Cop Cop Cop Cop Cop Cop Co	Y N Y N Y Y Dpm 0.000 (0.00) (0.01) 615.4	N N N N 1 Wo I 108851 E00 10763 E00 10763 13344	(7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Bik	N N Vol Used 1.0 (0.02706 1.0 (0.02706 1.0 (0.02706 1.0 (0.02706)	3% 90% 3% 90% 3% 100% 00 Sa 4) 00 Sa 4) 00 Sa 4) 00 Sa	N N N Yield,EnFct 90% 90%	(0.000E 1.0000E (0.000E 1.0000E (0.000E 1.0000E (0.000E Chem Yld,EFctU ID	E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 E+00 4.5045 E+00) 12.011 C/iLcC 0	754 5E-01 754 5E-01 1754 5E-01 1754 BikLcC/M	1.0000E+00 1.0000E+00 1.0000E+00	

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	Batch Nbr: 60	060336					Alpha	a Spe	ec, 7	This	so by AL	P,C	alcu	ated	Result	ts	- I dang mengganakan di mani pelabihkan bilan menusumban	4/1!	5/2006 7:13:	51 A
q	Status Method	Matrix	Protoco	Equat	ion Set	Y	Vrk Ord	Units/	Matrix	QC/E	B Sa/On Date	Analysis⊡	ate/PptV	Vt Sep1/	Sep2 Date	QC/Trace	rVial Mult∕Ent1	/ld Total/Analy	Vol Final/Co	unt V
	Calc S1 TRA-LAB BLANK	AIR	*STLE		WoBS 6C0100		P81AA	PCI/S AIR	A	B 0	2/05/06 06:00	04/13/06	3 10:42			684.05	1 Alq	1.00 S 1.00 S		
S	q Cnt Date	Paramete	r Samp	ole Crit	Bkgrn	d Cnt	Instr	Geom	Trc/A	v En	nt Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	AI
	04/13/06 06:32	: TH-228	2 500.2		2 1000	.0666	ALP114	COP	N Y	N	2.6103E-01 (7.831E-03)		N	93% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0689E+00	
	04/13/06 06:32	TH-230	3 500.2		1000	.0666	ALP114	COP	N Y	N	2.6103E-01 (7.831E-03)		N	93% 3%	N		1.0000E+00 (0.000E+00)	4.50 4 5E-01 1.00	1.0000E+00	
!	04/13/06 06:32	: TH-232	0 500.2		0 1000	.0666	ALP114	COP	N Y	N	2.6103E-01 (7.831E-03)		Ν	93% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
3	04/12/06 15:29	TH-234	5699 20	/	614 500 1	/	GPC30D	COP	Y Y	N	4.4610E-01 (6.691E-03)		N	100%	N		, ,	4.5045E-01	1.0000E+00	
5	Sq Calc Date	Parameter	Avg	Sa A	ct	Q	Net 4	Cnt Rt	Dpn	n Wo I	Blk Dpm-E	3lk Vo	Used		Yield,EnFo	t Chem Yid	,EFctU IDC/ILct		IDC StdDvMc	iC/L
	04/13/06	TH-228		0.0039 (0.0063		U4	1.9985 (3.161			8284 (311)	0.008284 (0.01311		1.0 0.01732	00 Sa 1)	93%		0.02937			
	04/13/06	TH-230		0.0092 (0.0067		U	4.9976 (3.604)			0592 14882			1.0 0.01 <mark>73</mark> 2	00 Sa 1)	93%		0.022258 0.006108			
	04/13/06	TH-232		0.00E0 (0.004		U	0.0000 (0.000)		0.00 (0.01	E00 10089	0.00E00 (0.01008	т.	1.0 0.0 <mark>173</mark> 2	00 Sa 1)	93%		0.01005	3		
	04/13/06	TH-234		286.48 (16.211				2E+02 9E+00)	636.1 (12.7	00538 75221			1.0 0.01732	00 Sa 1)	93%					
q	Status Method	Matrix	Protocol	Equat	ion Set	γ	/rk Ord	Units/	Matrix	QC/B	B Sa/On Date	AnalysisD	ate/PptV	Vt Sep1/	Sep2 Date	QC/Trace	r Vial Mult/Ent	/id Total/Analy	Vol Final/Co	unt
	Calc S1 TRA-LAB CHECK	AIR	*STLE		WoBS 6C0100		P81AC	PCI/S	A	S 0:	2/05/06 06:00	04/13/06	i 10:42	7,11		3.9950 359.37	1 Alq	1.00 S		
S	q Cnt Date	Paramete	r Samp	ole Cnt	8kgrn	d Cnt	Instr	Geom	Tre/A	v En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAd	j Decay	A
)	04/13/06 06:32	TH-228	1 500.0	666666	4 3 1000.		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)	annin i amin and a deel right yelling transport of provinces	N	92% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0689E+00	
	04/13/06 06;32	TH-230	398 500.0	666666	1 3 1000.		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
2	04/13/06 06:32	TH-232	0 500.0	666666	0 3 1000.		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
}	04/12/06 16:13	TH-234	2995 20	/	640 500	_	GPC30A	COP	Y Y	N	4.4818E-01 (6.723E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
)	- (1s Uncertainitie	es), Q - Qualifi	er. U Res	ult is Les	ss Than	Lc = 1	645 * TPU				Page	10		vil ************************************	alah dalah 	· 2000	Por/	Ont:17 F	RADCALC v4.8	Q 11
DC 3r-8	- Instrument Dete 39 Counts are Deri	ction Level in (Conc Unit	s MileC	: - Methr	od Deci	sion Level i	in Conc L nt, All Re	Inits, M esult Dig	IDC- M pits Ma	finimum Detectati	la Concentratio	on e - mm/d	d/yy ħh:mm	, 24hr Time		11800		TL Richland	J. 10

Ва	tch Nbr: 60	60336			F	Alpha Spe	c, Thiso	by ALP	, Calculated	Results	3	· —	4/15/20	06 7:13:52 AN
Sq	Calc Date	Parameter	ρνΑ	Sa Act	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	Yield,EnFct	Chem Yld,EF	ctU IDC/ILcC	BIkLcC/MDC	StdDvMdC/LcC
	04/13/06	TH-228	R	-0.005143 (0.007282)	U4	-1.99973E-03 (2.8281E-03)	-0.010681 (0.015114)	-0.010681 (0.015114)	1.00 Sa (0.017321)	92%		0.047756 0.016919		
	04/13/06	TH-230	R	1.90097 (0.16665)		7.94894E-01 (3.9907E-02)	4.220159 (0.294966)	4.220159 (0.294966)	1.00 Sa (0.017321)	92%	106%	0.028685		
	04/13/06	TH-232	R	0.00E00 (0.005857)	U4	0.00000E+00 (0.0000E+00)	0.00E00 (0.013003)	0.90E00 (0.013003)	1.00 Sa (0.017321)	92%		0.01296		
	04/13/06	TH-234	Ř	149.22199 (8.655889)		1.48470E+02 (2.7368E+00)	331.273149 (7.872795)	331.273149 (7.872795)	1.00 Sa (0.017321)	92%				

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 11

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Thorium Yield Determination by Beta-emitting Th-234 tracer

Reference Tracer Data: Ref. Date: 24-Feb-06

	Beta	Gross	Count	Bkg	Bkg	Bkg	Grams	SrY-90	DPM/g of
Ref. ID	Detector	Counts	Time	Counts	Time	СРМ	Found	Eff	Tracer
CAL5734	30A	1568	20	669	500	*1.3380	0.0757	0,4482	2271.37
7319312 . See a grant comment (1991)	A Processor Company						Average DP	M/g of tracer =	2271.37

Tracer Mass Tracer 0.00 That 9389 0.2744 623:26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Sample Trace	r Data:	
THTC9389 0.2744 623.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0		Tracer	DPM
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	VIAL ID		
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	THTC9389	0.2744	623,26
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FORM NO. RC-103, REV. 2, 10/95

3/30/2006 6:07:5	,2 PM			Sample Prepa	aration/Ana	lysis		Balance	ld:1120373922	
536403, Brown ar Caldwell	nd Caldwell	, Brown 8		PrpRc5016, SepR				Pipet		
Report Due: 03/	/21 /200 <i>6</i>			um-228,230,232 by IDARD TEST SET	Alpha Spec			Sep1 DT/Tm Tec		
Batch: 6060336		pCi/san	A1184			74		·		
SEQ Batch, Test: N		porsan	iibi	PIVI, GI	uote: EJ , 631	74		Sep2 DT/Tm Tec	ch: 4-12-06	rn f
				1100118				Prep Tec	ch: HansenM	
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 HX81N-1-AA J6B270158-1-SAMP		503.56sa	50.06g,in	0.0828g	THTC9385 03/30/06,pd 02/24/06,r	500				
02/05/2006 06:00		Am	ntRec: FOLDER	#Containers: 1	02/24/06/	, <u>V</u>	Scr:	Alpha:		Beta:
2 HX81Q-1-AA J6B270158-2-SAMP		501.73sa	50.10g,in	0.0832g	THTC9386 03/30/06,pd 02/24/06,r			· · · · · · · · · · · · · · · · · · ·		<i>*************************************</i>
02/05/2006 06:35		Am	itRec: FOLDER	#Containers: 1	02/24/000		Scr:	Alpha:		Beta:
3 HX81R-1-AA J6B270158-3-SAMP 		500.94sa	50.41g,in	0.0838g	THTC9387 03/30/06,pd 02/24/06,r					
02/05/2006 07:15			ntRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
4 HX81T-1-AA J6B270158-4-SAMP 		508.67sa	50.07g,in	0.082g	THTC9388 03/30/06,pd 02/24/06,r		·	•		
02/05/2006 07:45			ntRec: FOLDER	#Containers: 1			Scr.	Alpha:		Beta:
5 HX81V-1-AA J6B270158-5-SAMP 		501.14sa	50.49g,in	0.0839g	THTC9389 03/30/06,pd 02/24/06,r					
02/05/2006 08:15	4 EN 1 11 N DO 11 DIS	Am'	itRec: FOLDER	#Containers: 1			Scr.	Alpha:		Beta:
6 HX81W-1-AA J6B270158-6-SAMP III IIII IIIIIIIIIIIIIIIIIIIIIII		500.55sa	50.15g,in	0.0835g	THTC9390 03/30/06,pd 02/24/06,r					
02/05/2006 08:40	4	Am ^r	tRec: FOLDER	#Containers: 1			Ser:	Alpha:		Beta:
7 HX81X-1-AA J6B270158-7-SAMP		500.96sa	50.16g,in	0.0834g	THTC9391 03/30/06.pd 02/24/96,r					
02/05/2006 06:10		Am¹	tRec: FOLDER	#Containers: 1			Scr:	Alpha;		Beta:
STL Richland	Key: In - Initial A	mt, fi - Final Amt, o	di - Diluted Amt, s	1 - Sep1. s2 - Sep2	Page 1	ISV - In	sufficient Volum	ne for Analysis	W	O Cnt: 7
Richland Wa.			•	, ct-Cocktailed Added		. .		io ioi raidiyo.o		amplePrep v4.8.2

3/30/2006 6:07:: 536403 Brown a	nd Caldwall	, Browr		Sample Pres		ilysis		Balance	ld:1120373922	
536403, Brown a Caldwell Report Due: 03 /	31/2006	, Drows	S1 Thor	o PrpRc5016, Sepf ium-228,230,232 b NDARD TEST SET	RC5084(5003) y Alpha Spec			Pipe Sep1 DT/Tm Te		
Batch: 6060336 SEQ Batch, Test: N	FILTER	pCi/sa	ımpl	PM, C	Quote: EJ , 631	74		Sep2 DT/Tm Te		
								Prep Te	ch: HansenM	
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	OC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
HX811-1-AA GB270158-8-SAMP		501.81sa	50.45g,in	0.0837g	THTC9392 03/30/06,pd 02/24/06,r		·	<u> </u>	<u>. </u>	<u> </u>
2/05/2006 06:15		Ar	mtRec: FOLDER	#Containers; 1			Scr:	Alpha:		Beta:
HX812-1-AA 6B270158-9-SAMP	0.833sa	507.36sa	50.45g,in	0.0828g	THTC9393 03/30/06,pd 02/24/06,r	· · · · · · · · · · · · · · · · · · ·				Deta.
2/05/2006 06:05		Ar	ntRec: FOLDER	#Containers: 1			Scr:	Alpha;		Beta:
HX813-1-AA 6B270158-10-SAM	0.833sa > 	500.90sa	50.47g,in	0.0839g	THTC9394 03/30/06,pd 02/24/06,r			<u>'</u>		
2/05/2006 06:40		Ar	ntRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
HX814-1-AA BB270158-11-SAMI 		502.44sa	50.69g,in	0.084g	THTC9395 03/30/06.pd 02/24/06.r					
2/05/2006 07:20	EBUI E II 7 1 0 F BUE 	An	ntRec: FOLDER	#Containers: 1			Sor:	Alpha:		Beta:
H x815-1-aa B270158-12-sami - - 1		501.00sa	50.39g,in	0.0838g	THTC9396 03/30/06,pd 02/24/06,r		•			
2/05/2006 07:50		An	ntRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
H X816-1-AA B270158-13-SAMF - - [[505.04sa	50.23g _i in	0.0828g	THTC9397 03/30/06,pd 02/24/06,r					
2/05/2006 08:20		An	ntRec: FOLDER	#Containers: 1			Scr:	Alpha:		Beta:
H X817-1-AA B270158-14-SAMF H	0.833sa	501.67sa	50.05g,in	0.0831g	THTC9398 03/30/06,pd 02/24/06,r					
#	1984 B 17 B 4 B 10 B14	Am	ntRec: FOLDER	#Containers; 1			Scr.	Alpha:		Beta:
STL Richland	Key: In - Initial Am	it. fi - Final Amt	di - Diluted Amt e	l - Sep1, s2 - Sep2	Page 2	1007 - 1	nuddalaach V-II	- 4 4 b		
Richland Wa.				ct-Cocktailed Added	· ay o z	15V - In:	sufficient Volume	or Analysis		VO Cnt: 14 SamplePrep v4.8

3/30/2006 6:07:	53 PM			Sa	mple Prepa	ration/Ana	ysis		Balance	ld:112037392	2
3/30/2006 6:07: 536403, Brown a Caldwell	nd Caldwell	, Brov		\$1 Thorium-2	Rc5016, SepR(28,230,232 by				Pipe Sep1 DT/Tm Te	et #:	
Report Due: 03	/31/2006			01 STANDAR					•		
Batch: 6060336	FILTER	pCi/s	sampl		PM, Qı	iote: EJ , 631	74		Sep2 DT/Tm Te	ch:	
SEQ Batch, Test: 1	Vone								Prep Te	ch: HansenM	
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Un	18	ial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analys Init/Date	t, Comments:
5 HX818-1-AA 6B270158-15-SAN	0.833sa 1P	501.09sa	50.0	0.0 0.0	0833g	THTC9399 03/30/06.pd 02/24/06.r					
2/05/2006 06:45			AmtRec: FO	LDER #	Containers: 1			Scr:	Alpha:		Beta:
6 H0EP8-1-AA-B 6C010000-336-BL	K		1.0	Osa,in 1.0)0sa 	THTC9400 03/30/06,pd 02/24/06,r				·	
02/05/2006 06:00			AmtRec:	#Conta	niners: 1			Scr:	Alpha:		Beta:
7H0EP8-1-AC-C 6C010000-336-LC	s		1.0	Osa,in 1.	00sa	THSH0232 03/07/06,pd 02/24/06,r					
02/05/2006 06:00			AmtRec:	#Cont	ainers: 1			Sor:	Alpha:		Beta:
Comments:											
11 Clients for				Brown	& Caldwell		EJ , 63174				
5364U3, BIC	own and Caldwe	<u> </u>					···				
Th-228	Constituent Li: RDL:1 RDL:1	pCi/sam 1	LCL: LCL:	UCL: UCL:	RPD:	Th-230 Th-234	RDL:1 RDL:	pCi/s		UCL: UCL:115	RPD: RPD:20
	RDL:1 RDL:1	-	LCL: LCL:	UCL:	RPD: RPD:	Th-230 Th-234	RDL:1 RDL:	pCi/s pCi/s		UCL: UCL:115	RPD: RPD:20
OEP81AC-LCS: Th-230	RDL:1	pCi/sam 1	LCL:70	UCL:130	RPD:20	Th-234	RDL:	pCi/s	sam LCL:20	UCL:115	RPD:20
X81N1AA-SAMP (Uncert Le 10EP81AA-BLK:	Calc Info: vel (#s).: 2	Decay to	SaDt: Y	Blk Subt	.ı N Sci.	Not.: Y O	Rs: B				·
STL Richland Richland Wa.	Key: In - Initial A				ep1, s2 - Sep2 Cocktailed Added	Page 3	ISV - I	nsufficient Volum	ne for Analysis		WO Cnt: 17 Prep_SamplePrep v4.8

Batch	Nbr: 6	6060336		Alpha (-	•	lesults	4	/13/2006 4:17:44 PI
						mary Report			
Status	Meth	Matrix	Wrk Ord		er Sa Act	Uncert Q Units	Av ILcC	IDC	QC Yield RYId
hlso	by AL	P	Ric	hland Star	ndard Alpiso	Wo Blk Subt.		ج المراج 4.20E-01	nect
Calc	S1	AIR	HX81N1AA	TH-228	4.52E-02	(9.05E-02) U4 PCI/SA	R 1.49E-01	4.20E-01	98%
Calc	S1	AIR	HX81N1AA	TH-230	1.47E-01	(8.74E-02) PCI/SA	R 6.92E-02	Z.52E-01	96%
Calc	S1	AIR	HX81N1AA	TH-232	0.00E+00	(5.15E-02) U4 PCI/SA	R	1.14E-01	98%
Calc	S1	AIR	HX81Q1AA	TH-228	-2.19E - 02	(2.20E-02) U4 PCI/SA	R 7.21E-02	2.63E-01	97%
Calc	S1	AIR	HX81Q1AA	TH-230	-4.08E-02	(2.90E-02) U4 PCI/SA	R 9.48E-02	3.00E-01	97%
Calc	\$1	AIR	HX81Q1AA	TH-232	2.04E-02	(4.56E-02) U4 PCI/SA	R 6.70E-02	2.44E-01	97%
Calc	S1	AIR	HX81R1AA	TH-228	0.00E+00	(8.20E-02) U4 PCI/SA	R	1.82E-01	83%
Calc	S1	AIR	HX81R1AA	TH-230	2.49E-01	(1.26E-01) PCI/SA	R	1.69E-01	83%
Calc	S1	AIR	HX81R1AA	TH-232	6.23E-02	(6.25E-02) U4 PCI/SA	R	1.69E-01	83%
Calc	S1	AIR	HX81T1AA	TH-228	3.70E-01	(1.56E-01) PCI/SA	R 9.36E-02	3.41E-01	143% 7
Calc	S1	AIR	HX81T1AA	TH-230	1.38E+00	(2.88E-01) PCI/SA	R	1.43E-01	143% / (C
Calc	S1	AIR	HX81T1AA	TH-232	3.70E-01	(1.43E-01) PCI/SA	R	1.43E-01	143%∫
Calc	S1	AIR	HX81V1AA	TH-228	1.31E-01	(9.30E-02) U4 PCI/SA	R 1.01E-01	3.21E-01	101%
Calc	S1	AIR	HX81V1AA	TH-230	5.88E-01	(1.64E-01) PCI/SA	R 6.67E-02	2.43E-01	101%
Calc	S1	AIR	HX81V1AA	TH-232	1.42E-01	(8.43E-02) PCI/SA	R 6.67E-02	2.43E-01	101%
Calc	S1	AIR	HX81W1AA	TH-228	-2.22E-02	(2.22E-02) U4 PCI/SA	R 7.29E-02	2.66E-01	98%
Calc	S1	AIR	HX81W1AA	TH-230	1.44E-01	(8.57E-02) PCI/SA	R 6.79E-02		98%
Calc	S1	AIR	HX81W1AA	TH-232	-2.06E-02	(2.07E-02) U4 PCI/SA	R 6.79E-02		98%
				TH-228	0.00E+00	(6.64E-02) U4 PCI/SA	R	1.47E-01	99%
Calc Calc	S1 S1	AIR AIR	HX81X1AA HX81X1AA	TH-230	1.01E-01	(7.18E-02) U4 PCI/SA	R	1.37E-01	99%
Calc	S1	AIR	HX81X1AA	TH-232	0.00E+00	(6.18E-02) U4 PCI/SA	R	1.37E-01	99%
							R 6.86E-02		95%
Calc	S1	AIR	HX8111AA	TH-228	-2.08E-02	(2.09E-02) U4 PCI/SA (6.77E-02) PCI/SA	R 6.00E-02	1.05E-01	95%
Calc	S1	AIR	HX8111AA	TH-230 TH-232	1.16E-01	(6.77E-02) PCI/SA (4.34E-02) U4 PCI/SA	R 6,38E-02		95%
Calc	S1	AIR	HX8111AA		1.94E-02	•			
Calc	S1	AIR	HX8121AA	TH-228	1.40E-01	(8.13E-02) PCI/SA	R	1.26E-01	99%
Calc	S1	AIR	HX8121AA	TH-230	4.33E-02	(4.34E-02) U4 PCI/SA	R R	1.17E-01	99% 99%
Calc	S1	AIR	HX8121AA	TH-232	4.33E-02	(4.34E-02) U4 PCI/SA		1.17E-01	
Caic	\$1	AIR	HX8131AA	TH-228	9.28E-02	(8.71E-02) U4 PCI/SA	R 1.08E-01		95%
Calc	S1	AIR	HX8131AA	TH-230	1.08E-01	(7.83E-02) U4 PCI/SA	R 7.11E-02		95%
Calc	S1	AIR	HX8131AA	TH-232	0.00E+00	(5.29E-02) U4 PCI/SA	R	1.17E-01	95%
Calc	S1	AIR	HX8141AA	TH-228	5.90E-02	(1.18E-01) U4 PCI/SA	R 1.94E-01		95%
Calc	S1	AIR	HX8141AA	TH-230	4.67E-01	(1.71E-01) PCI/SA	R 9.04E-02		95%
Calc	S1	AIR	HX8141AA	TH-232	0.00E+00	(6.73E-02) U4 PCI/SA	R	1.49E-01	95%
Calc	S1	AIR	HX8151AA	TH-228	6.92E-01	(1.86E-01) PCI/SA	R	1.25E-01	95%
Calc	S1	AIR	HX8151AA	TH-230	3.17E+00	(4.37E-01) PCI/SA	R 4.46E-02	2.06E-01	95%
Calc	S1	AIR	HX8151AA	TH-232	6.01E-01	(1.67E-01) PCI/SA	Ŕ	1.16E-01	95%
Calc	S1	AIR	HX8161AA	TH-228	5.61E-01	(1.94E-01) PCI/SA	R 9.72E-02	3.54E-01	98%
		rtainities) nt Detection Le	evel in Conc Units		F	Page 1			RecCnt:50
VILCC+ I VIDC - I	Method D Minimum	ecision Level Detectable Co	in Conc Units	All Results I	r, U is Less Than I Displayed to Three mm/dd/yy hh:mm	e Digits Reguardless of Significar	its		RADCALC v4.8.18 STL Richland

Batch	Nbr: 6	060336	<u> </u>	Alpha S	pec, Thi	so by Al	_P	, R	esı	ılts	2	1/13/2	2006 4:1	7:44 PM
					Sumr	nary Rep	oc	rt						
Status	Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert	Q	Units	Av	ILcC	IDC	QC	Yield	RYId
Calc	S1	AIR	HX8161AA	TH-230	2.20E+00	(3.84E-01)		PCI/SA	R		1.49E-01		98%	
Calc		AIR	HX8161AA	TH-232	8.25E-01	(2.21E-01)		PCI/SA	R		1.49E-01		98%	
Calc		AIR	HX8171AA	TH-228	1.92E-01	(1.36E-01)	U4	PCI/SA	R	1.49E-01	4.70E-01		94%	
	S1	AIR	HX8171AA	TH-230	1.19E-01	(8.45E-02)			R		1.61E-01		94%	
	S1	AIR	HX8171AA	TH-232	5.95E-02	(5.96E-02)			В		1.61E-01		94%	
	S1	AIR	HX8181AA	TH-228	5.11 E-0 2	(5.13E-02)	U4	PCI/SA	R		1.39E-01		90%	
	S1	AIR	HX8181AA	TH-230	0.00E+00	(5.82E-02)	Ų4	PCI/SA	R		1.29E-01		90%	
	S1	AIR	HX8181AA		0.00E+00	(5.82E-02)			R		1.29E-01		90%	
Calc		AIR	H0EP81AA	TH-228	3.99E-03	(6.32E-03)	U4	PCI/SA	R	9.28E-03	2.94E-02	В	93%	
	S1	AIR	H0EP81AA		9.28E-03	(6.72E-03)			R	6.10E-03	2.23E-02	В	93%	
	S1	AIR	HOEP81AA			(4.54E-03)			R		1.01E-02	В	93%	
]	S1	AIR	H0EP81AC	TH-228	-5.14E-03	(7.28E-03)	U4	PCI/SA	R	1.69E-02	4.78E-02	s	92%	
1	S1	AIR	H0EP81AC	TH-230	1.90E+00	(1.67E-01)		PCI/SA	R	7.87E-03	2.87E-02	S	92%	106%
Calc		AIR	H0EP81AC		0.00E+00	(5.86E-03)		PCI/SA	R		1. 30 E-02	S	92%	-

Page 2

RecCnt:68 PADCALC v4.8.18 STL Richland

^{() - (1}s Uncertainities)

IDC - Instrument Detection Level in Conc Units

MLcC- Method Decision Level in Conc Units

MDC - Minimum Detectable Concentration

"Std - Lc, MDC using StdDev for Set of Blanks

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 6060336	Alpha Spec, Thiso by ALP	, Calculated Results	4/13/2006 4:17:45 PM
	Detailed Re	eport	

q s	Status Method	Matrix	Protocol	Equati	on Set	Wrk Or	d	Units/Ma	atrix C	C/BE	3 Sa/On Date	AnalysisD	ate/PptWt	Sep1/s	Sep2 Date	QC/1racer	AISI MANAMERISI	d Total/Analy	yor rinaucou	int ve
	Calc S1 03,P 0510	AIR	*STLE	•	WoBS HX 3270158-1 v			PCI/SA AIR		02	/05/06 06:00	04/12/06	20:39			682.55 A	1	1.00 Sa 0.08281 Sa		
Sa	Cnt Date	Parameter	Samp	le Cnt	Bkgrnd Cnt	Inst	r	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yid Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abı
	04/12/06 16:29	TH-228	3	666666	4 998.95	ALP:	171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0683E+00	
	04/12/06 16:29	TH-230	4		1 998.95	ALP	171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	04/12/06 16:29) TH-232	0		0 998.95	ALP	171	COP	N Y	N	2.6455E-01 (7.937E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	04/12/06 14:1	3 TH-234	6011			GP0	30A	COP	Y Y	N	4.4818E-01 (6.723E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
S	q Calc Date	Paramete		Sa A		Q	Net C	nt At	Dpm	Wo E		k Vo	ol Used		Yield,EnFo	t Chem Yld	EFctU IDC/ILc(BikLcC/f	MDC StdDvMd	iC/L
_	04/13/06	TH-228	R	0.0452				DE-03 BE-03)	0.007		0.007783) (0.015569	9) (1.0 0.027064	0 Sa ()	98%		0.419954 0.148786			
	04/13/06	TH-230	R	0.1472	79			9E-03 5E-03)	0.027 (0.01		0.027076) (0.015998		1.0 0. 02706 4	0 Sa 1)	98%		0.252394 0.06922	Į.		
	04/13/06	TH-232	R	0.00E0 (0.051	-	U4 0. (0		DE+00 DE+00)	0.00		0.00E00 (0.00947	1) (1.0 0.027064	0 Sa 4)	98%		0.114036	5		
	04/13/06	TH-234	R	3632.2 (218.6				0E+02 9E+00)	667.7 (13.2				1.0 0.02706	0 Sa 4)	98%					
Sq	Status Method	Matrix	Protoco	l Equa	tion Set	Wrk O	rd	Units/N	Aatrix	QC/B	B Sa/On Date	Analysis	Date/PptV	/t Şep1	/Sep2 Date	QC/Trace	r Vial Mult/Ent	Yld Total/Analy	y Vol Final/Co	ount
	Calc S1 403,P 0511	AIR	*STLE		WoBS H 6B270158-2		AA ,	PCI/S/	A	0.	2/05/06 06:35	04/12/0	6 20:39			684.05	1 Alg	1.00 \$ 0.083179 \$		
s	q Cnt Date	Paramet	er Sam	ple Cnt	Bkgrnd Ci	nt ins	str	Geom	Trc/A	/ Er	nt Efficiency1	Efficiency	2 Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Canv Fct/VolAc	dj Decay	
)	04/12/06 16:2	9 TH-228	0 499.	466666	1 6 998.95	ALF	172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N		1.0000E+00 (0.000E+00)		1.0683E+00	1
1	04/12/06 16:2	9 TH-230	0	466666	2 6 998.95	ALF	2172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N			4.5045E-01 12.022294	1.0000E+00)
2	04/12/06 16:2	9 TH-232	1		1 6 998.95	ALF	P172	COP	N Y	N	2.7367E-01 (8.210E-03)		N	97% 4%	N			4.5045E-01 12.022294	1.0000E+00)
3	04/12/06 14:	8 TH-234	610 20		767 500	GP	C30B	COP	Y Y	N	4.5684E-01 (7.492E-03)		Ν	100%	N			4.5045E-01 12.022294	1,0000E+00)
·	- (1s Uncertain	ities) O - Qual	fier II Ba	l si tluse	es Than I c	= 1.645	·TPU		·····		Page Minimum Detectal						Rec	Cnt:2	RADCALC v4	1.8. ·

Ba	tch Nbr: 60	60336			Α	lpha	Spe	c, Tł	nlse	o by ALP	, Ca	alcula	ated F	Results	S		4/13/	2006 4:17:4	45 PM
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net C	nt Rt	Dpm V	Vo Bl	k Dpm-Blk	Vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILcC	BikLcC/M	C StdDvMd	.C/LcC
	04/13/06	TH-228	R	-0.021901 (0.02196)	U4	-1.0010 (1.0011		-0.003		-0.003786 (0.00379)	(0	1.00 (027064)		97%		0.262 7 26 0.072054			
	04/13/06	TH-230	R	-0.040757 (0.028976)	U4	-2.0021 (1. 41 57		-0.007 (0.005		-0.007526 (0.005334)	(0	1.00 (027064.		97%		0,299973 0.094816			
	04/13/06	TH-232	R	0.020379 (0.045593)	U4	1.00108 (2.2384		0.0037 (0.008		0.003763 (0.008416)	(0	1.00 (027064)		97%		0.244463 0.067045			
	04/13/06	TH-234	R	3600.906337 (218.052388)		3.03766 (3.9074		664.93 (13.85				1.00 (027064)		97%					
q Sta	itus Method	Matrix F	rotoc	ol Equation Set	Wrl	Ord	Units/N	latrix C	C/BE	Sa/On Date	AnalysisD	ate/PptW1	: Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy	ol Final/Co	unt Vo
Cal 36403,	lc S1	AIR '	STLE	AlpisoWoBS "J6B270158			PCI/S/ AIR	\	02	/05/06 07:15	04/12/06	20:39	<u> </u>		687.30 A	1 Mg	1.00 Sa 0.083825 Sa		
Sq	Cnt Date	Parameter	San	nple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
04	1/12/06 16:29	TH-228	0 499.	0 4666666 998.95		LP173	COP	N Y		2.0829E-01 (6.249E-03)	n an annanananan an-ma on an-manana	N	83% 3%	N	and a state of the	1.0000E+00 (0.000E+00)		1.0682E+00	***************************************
04	¥/12/06 16:29	TH-230	4 499	, , ,4666666 998.95		LP173	COP	N Y		2.0829E-01 (6.249E-03)		N	83% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
04	4/12/06 16:29) TH-232	1	, 4666666 998.95	A	LP1 7 3	COP	N Y		2.0829E-01 (6.249E-03)		N	83% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
04	4/12/06 14:18	3 TH-234	511 20			PC30C	COP	Y Y		4.4643E-01 (6.696E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
Sq	Calc Date	Parameter			Q	Net (Cnt Rt	Dpm		` '	k Vo	l Used		Yleld,EnFc	t Chem Yld	,EFctU IDC/ILcC		DC StdDvMd	dC/Lc(
<u>.</u>	04/13/06	TH-228	R	0.00E00 (0.082043)	U4	0.0000		0.00E (0.014		0.00E00) (0.014293	9) ((1.0 0.027064	0 Sa)	83%		0.181538	J		
	04/13/06	TH-230	R	0.249334 (0.12602)		8.0085 (4.004		0.046 (0.023		0.046399 (0.023302	·) (6	1. 0 0.027064	0 Sa I)	83%		0.168924	1		
	04/13/06	TH-232	R	0.062333 (0.062503)	U4	2.0021 (2.002		0.011 (0.01		0.0116) (0.011613	3) (1	1.0 0.027064	0 Sa I)	83%		0.168924	1		
	04/13/06	TH-234	R	3060.496301 (185.035182)		2.5425 (3.576	8E+02 4E+00)	569.5 (11.7				1.0 0.027064	0 Sa I)	83%					
sq St	atus Method	Matrix	Protoc	col Equation Set	Wi	k Ord	Units/	Matrix	QC/B	B Sa/On Date	Analysis	ate/PptW	t Sep1	/Sep2 Date	QC/Trace	r Vial Mult/Ent	/ld Total/Analy	Vol Final/Co	ount V
	alc S1 3,P 0513	AIR	*STL	E AlpisoWoBS ,J6B270158			PCI/S	A	02	2/05/06 07:45	04/12/0	6 20:39			684.05	1 Alq	1.00 S 0.081995 S		-
Sq	Cnt Date	Parameter	r Sa	mple Cnt Bkgrnd	d Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Ab
0 0	4/12/06 16:2	9 T H-228	7 499	1 9.4666666 998.9		ALP174	COP	N Y	N	2.0781E-01 (6.234E-03)		N	143% 5%	N		1.0000E+00 (0.000E+00)	4.5045E-01 12.195891	1.0682E+00)
<u> </u>	/1s Lincertainit	ies). O - Qualific	er U B	Result is Less Than	Lc = 1 F	45 * TPU			····	Page					***************************************	Rec	Cnt:4 F	ADCALC v4	.8.18
nc -	Instrument Det	tection Level in C	Cone H	Inits, MLcC - Metho ation of Each Sr-89	id Decis	ion Level	in Cond	Units, M esult Dig	DC- N its Ma	/linimum Detectabl ay Not be Significa	le Concentrat nts, Date/Tin	ion ne - mm/d	d/yy hh:mi	m, 24hr Time	,		5	TL Richland	

E	Batch Nbr: 606	0336				Alpha	Spe	c, T	hls	o by ALP	, Ca	lcula	ated F	Results			4/	13/2006 4:17	':45 P
•	04/12/06 16:29	TH-230	26 ·	0 566666 998.9		ALP174	COP	N Y		2.0781E-01 (6.234E-03)		N	143% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
1	04/12/06 16:29	TH-232	7 499.4	0 866666 998.		ALP174	COP	N Y		2.0781E-01 (6.234E-03)		N	143% 5%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
	04/12/06 14:18	TH-234	8727 20	/ 614 500	_ (GPC30D	COP	Y Y		4.4610E-01 (6.691E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
S	q Calc Date	Parameter	Avg	Sa Act	Q	Net (Ont At	Đpm	Wo B	lk Dpm-Blk	Vol U	sed		Yield,EnFct	Chem Yld,E	FctU IDC/ILcC	BIKLcC	MDC StdDvN	/dC/L
	04/13/06	TH-228		0.36971 (0.155529)		1.3013		0.063		0.063001 (0.02626)	(0.0	1.00 27064)		143%		0.341158 0.093564			
	04/13/06	TH-230		1.376108 (0.288111)		5.2055 (1.0209		0.250		0.250491 (0.050474)	(0.0	1.00 (27064)		143%		0.143433	I		
	04/13/06	TH-232	R	0.370491 (0.142641)		1,4014 (5,297)		0.067		0.06744 (0.02568)	(0.0	1.00 (27064)		143%		0.143433	I		
	04/13/06	TH-234		5358.447032 (320.286092)			2E+02 2E+00)	975.3 (17.9				1.00 (27064)		143%					
9	Status Method	Matrix F	rotoco	Equation Se	_	rk Ord	Units/M	latrix	QC/BI	B Sa/On Date	AnalysisDat	e/PptWt	t Sep1/	Sep2 Date	QC/Tracer \	Vial Mult/EntY	/ld Total/An	aly Vol Final/0	Count
	Calc S1 A	IIR .	STLE	AlpisoWoB	i		PCI/SA			2/05/06 08:15	04/12/06 2 reand				684.80 Al	1	1.00 0.08392!		
				,0002,01			/	∖ ለ⊾ ດለ	\sim \sim	ر س		,							
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgr							Efficiency 2	•	Yld Fct	Ent E	lik Value	Ingr Fct	Conv Fct/Vol.	Adj Decay	ø
Sq	Cnt Date 04/12/06 16:29		4	ple Cnt Bkgr	nd Cnt		Geom		v Ent			•		Ent E	encenta i no compresso de platagos de la calca de la del se del se de la calca de la calca de la calca de la c		4.5045 E- 01		
Sq	· · · · · · · · · · · · · · · · · · ·	TH-228	4 499.4 15	ple Cnt Bkgr 2 1666666 998.	95	Instr	Geom	Trc/A	v Ent	2.6497E-01		Ent	Yld Fct 101%		encenta i no compresso de platagos de la calca de la del se del se de la calca de la calca de la calca de la c	1.0000E+00 (0.000E+00)	4.5045E-01 11.915402 4.5045E-01	1.0682E+0	00
Sq	04/12/06 16:29	TH-228 TH-230	4 499.4 15 499.4	2 4666666 998. 1 4666666 998	95 95	Instr ALP175	Geom COP	N Y N	v Ent N N	2.6497E-01 (7.949E-03) 2.6497E-01		Ent N	Yld Fct 101% 4% 101%	N	encenta i no compresso de platagos de la calca de la del se del se de la calca de la calca de la calca de la c	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01	1.0682E+0	00
Sq	04/12/06 16:29 04/12/06 16:29	TH-228 TH-230 TH-232	4 499.4 15 499.4 4 499.4 6244	ple Cnt Bkgr 2 4666666 998 1 4666666 998 1 4666666 998 640	95 95 95	Instr ALP175 ALP175	Geom COP COP	N Y N Y N Y N Y	N Ent	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01		Ent N	Yid Fct 101% 4% 101% 4% 101%	N N	encenta i no compresso de platagos de la calca de la del se del se de la calca de la calca de la calca de la c	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01	1.0682E+0 1.0000E+0 1.0000E+0	00
Sq 3	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29	TH-228 TH-230 TH-232	4 499.4 15 499.4 4 499.4 6244 20	ple Cnt Bkgr 2 1666666 998 1 1666666 998	95 95 95	ALP175 ALP175 ALP175 GPC30A	Geom COP COP	N Y N Y N Y N Y	N Ent	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03)	Efficiency 2	Ent N N	Yld Fet 101% 4% 101% 4% 101% 4%	N N N	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01	1.0682E+0 1.0000E+0 1.0000E+0	00 00 00
Sq.)	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29 04/12/06 14:43	TH-228 TH-230 TH-232 TH-234	4 499.4 15 499.4 4 499.4 6244 20 Avg	ple Cnt Bkgr 2 1666666 998 1 1666666 998 640 500 Sa Act	95 95 95	ALP175 ALP175 ALP175 GPC30A Net	Geom COP COP COP COP	N Y N Y N Y Y Y Dpn	N N N N	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03) Blk Dpm-Bll	Efficiency 2	Ent N N N N	Yld Fet 101% 4% 101% 4% 101% 4% 100%	N N N	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 C BikLe	1.0682E+0 1.0000E+0 1.0000E+0 1.0000E+0	00 00 00
Sq	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29 04/12/06 14:43 6q Calc Date	TH-228 TH-230 TH-232 TH-234 Parameter	4 499.4 15 499.4 499.4 6244 20 Avg	ple Cnt Bkgr 2 4666666 998 4666666 998 4666666 998 500 Sa Act 0.130748 (0.092952)	95 95 95	ALP175 ALP175 ALP175 ALP175 GPC30A Net 4 6.006- (4.247 2.903	Geom COP COP COP COP A COP Cnt Rt 44E-03	N Y N Y Y Dpm 0.02 (0.010	N N N N N N N N N N N N N N N N N N N	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03) Blk Dpm-Bll 0.022805) (0.016161	vol	Ent N N N N N N 1.00	Yld Fet 101% 4% 101% 4% 101% 4% 100%	N N N N Yield,EnFct	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) EFett IDC/ILe	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 C BlkLe	1.0682E+0 1.0000E+0 1.0000E+0 1.0000E+0	00
Sq	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29 04/12/06 14:43 6q Calc Date 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228	4 499.4 15 499.4 4 499.4 6244 20 Avg	ple Cnt Bkgr 2 1666666 998 1 4666666 998 640 500 Sa Act 0.130748 (0.092952) 0.588056 (0.164184) 0.141945	95 95 95	Instr ALP175 ALP175 ALP175 GPC30A Net 6.006-(4.247 2.903 (7.818 7.007-007-007-007-007-007-007-007-007-00	Geom COP COP COP COP Cnt Rt 44E-03 72E-03)	N Y N Y Y Y Dpn 0.02 (0.00 0.00 0.00 0.00 0.00 0.00 0.0	N N N N N N N N N N N N N N N N N N N	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03) 3lk Dpm-Bll 0.022805) (0.016161 0.109563 0) (0.029949	vol) (0.	Ent N N N N Used 1.00 027064 1.00	Yld Fet 101% 4% 101% 4% 101% 4% 100% 00 Sa 4) 00 Sa 4) 00 Sa	N N N N Yield,EnFct	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00) 1.0000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00) EFetU IDC/ILc 0.32076 0.10138 0.24325	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 C BikLe 4	1.0682E+0 1.0000E+0 1.0000E+0 1.0000E+0	00
Sq :	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29 04/12/06 14:43 6q Calc Date 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230	4 499.4 15 499.4 4 499.4 6244 20 Avg	ple Cnt Bkgr 2 4666666 998 4666666 998 640 500 Sa Act 0.130748 (0.092952) 0.588056 (0.164184)	95 95 95 U4	Instr ALP175 ALP175 ALP175 GPC30A Net 1 6.006- (4.247 2.903 (7.818 7.007- (4.127 3.109	Geom COP COP COP A COP Cnt Rt 44E-03 72E-03) 10E-02 36E-03) 49E-03	N Y N Y Y Dpm 0.02 (0.00 0.02 (0.00 693.	N N N N N N N N N N N N N N N N N N N	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03) 3lk Dpm-Bil 0.022805 0.016161 0.109563 0.029949 0.026446 0) (0.015626	(Vol.) (0.) (0.23	Ent N N N N N N N 1.00 027064 1.00 027064 1.00 027064	101% 4% 101% 4% 101% 4% 100% 00 Sa 4) 100 Sa 4) 100 Sa 4) 100 Sa 4)	N N N N Yield,EnFct 101%	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00) 1.0000E+00) EFetty IDC/ILe 0.32076 0.10138 0.24325 0.06671 0.24325	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 C BikLe 4	1.0682E+0 1.0000E+0 1.0000E+0 1.0000E+0	00 00 00
Sq 3	04/12/06 16:29 04/12/06 16:29 04/12/06 16:29 04/12/06 14:43 6q Calc Date 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230 TH-232 TH-232	4 499.4 499.4 499.6 6244 20 Avg R R	ple Cnt Bkgr 2 3666666 998 4666666 998 4666666 998 500 Sa Act 0.130748 (0.092952) 0.588056 (0.164184) 0.141945 (0.084258) 3723.50099 (223.997795	95 95 95 95 4 4 8 8	Instr ALP175 ALP175 ALP175 GPC30A Net 6.006 (4.247 2.903 (7.818 7.007 (4.127 3.109 (3.951	Geom COP COP COP A COP A COP Cot Rt 44E-03 72E-03) 10E-02 36E-03) 49E-03 75E-03)	N Y N Y Y Dpm 0.02 (0.00 0.02 (0.00 693.	N N N N N N N N N N N N N N N N N N N	2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 2.6497E-01 (7.949E-03) 4.4818E-01 (6.723E-03) 3lk Dpm-Bil 0.022805 0.016161 0.109563 0.029949 0.026446 0) (0.015626	(Vol.) (0.) (0.23 (0.4)	N N N N N Used 1.00 027064 1.0 027064 1.0	101% 4% 101% 4% 101% 4% 100% 00 Sa 4) 100 Sa 4) 100 Sa 4) 100 Sa 4)	N N N N Yield,EnFct 101% 101%	and a second popular and a second popular and a second popular and a second popular and a second popular and a	1.0000E+00 (0.000E+00) 1.0000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) EFett IDC/ILc 0.32076 0.10138 0.24325 0.06671 0.24325 0.06671	4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 4.5045E-01 11.915402 C BikLe 4	1.0682E+0 1.0000E+0 1.0000E+0 1.0000E+0	00 00 00 00 MdC/

and the same	Batch Nbr: 6	The state of the s	· h-P(-k-she-leg pengag-p-ness				n A Styren and role	-		of Assert "L	o by ALF	, U	alcula	ated I	Result	S		4/13	3/2006 4:17:4	46 F
q 5	Status Method	Matrix	Protoco	l Equati	on Set	Wrk Or	d (Jnits/Ma	atrix C	C/B	B Sa/On Date	AnalysisD	ate/PptWt	Sep1/	Sep2 Date	QC/Trace	r Vial Mult/EntY	id Total/Analy	Vol Final/Cou	unt \
	Calc S1 03,P 0515	AIR	*STLE	•	WoBS B270158-6	HX81W1/ 3 v4.8.18		PCI/SA		02	2/05/06 08:40	04/12/06	20:39		to PP - PP - PP - PP - PP - PP - PP - PP	684.55	1 Alq	1.00 S 0.083458 S		
Sq	Cnt Date	Paramete	er Samı	ple Cnt	Bkgrnd (Ont Insti	r (Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VoiAdj	Decay	А
	04/12/06 16:29	9 TH-228	0 499.4	666666	1 998.95	ALP1	76 C	OP	N Y	N	2.6767E-01 (8.030E-03)		N	98% 4%	N	A Maria - Annae A Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae Annae An	1.0000E+00 (0.000E+00)		1.0682E+00	
	04/12/06 16:29	9 TH-230	4 499.4	1666666	1 998.95	ALP1	76 C	OP	N Y	N	2.6767E-01 (8.030E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	04/12/06 16:29	9 TH-232	0 499.4	1666666	1 998.95	ALP1	76 0	OP	N Y	N	2.6767E-01 (8.030E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	04/12/06 14:43	3 TH-234	6152 20		767 500	GPC	30B C	OP	Y Y	N	4.5684E-01 (7.492E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
S	Calc Date	Paramete	r Avg	Sa A	ct	Q	Net Cn	t Rt	Dpm	Wo E	Bik Dpm-B	ik Vo	Used		Yield,EnFc	t Chem Ylo	,EFctU IDC/ILco		IDC StdDvMc	iC/I
	04/13/06	TH-228	R	-0.0221 (0.0222		U4 -1.	00105 0011E		-0.003 (0.003				1.00		98%		0.265883 0.07292	3		
	04/13/06	TH-230	R	0.1443 (0.0857			0749E 1275E		0.026 (0.015		0.02675) (0.01580)	") (C	1.00 0.027064		98%		0.24 74 22 0.067857			
	04/13/06	TH-232	R	-0.0206 (0.0206	-	U4 -1.	00105 0011E		-0.003 (0.003		-0.00382 ⁻) (0.003826		1.00 0.027064		98%		0.247422 0.06785			
	04/13/06	TH-234	R	3616.03 (218.93			9221E		669.94 (13.94				1.00 0.027064		98%					
q :	Status Method	Matrix	Protoco	l Equat	ion Set	Wrk Or	d	Units/M	atrix (C/B	B Sa/On Date	AnalysisD	ate/PptW	Sep1/	Sep2 Date	QC/Trace	rVial Mult∕Ent¹	/ld Total/Analy	Vol Final/Co	uп
	Calc S1 03,P 0516	AIR	*STLE	•	WoBS B270158-	HX81X1A 7 v4.8.18		PCI/SA		02	2/05/06 06:10	04/12/06	20:39	· ************************************	***************************************	684.05	1 Alq ~	1.00 S 0.083406 S		
Sq	Cnt Date	Paramet	er Sam	ple Cnt	Bkgrnd (Ont Inst	r (Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fet	Conv Fct/VolAd	j Decay	
	04/12/06 16:29	9 TH-228	0 499.4	1666666	0 998.95	ALP	177 C	OP	N Y	N	2.1725E-01 (6.517E-03)		N	99% 4%	N		1.0000E+00 (0.000E+00)		1.0683E+00	
	04/12/06 16:29	9 TH-230	2 - 499.4	\$66666E	0 998.95	ALP	177 C	OP	N Y	N	2.1725E-01 (6.517E-03)		N	99% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.989485	1.0000E+00	
	04/12/06 16:29	9 TH-232	0 499.4	166666	0 998.95	ALP	177 (ОР	N Y	N	2.1725E-01 (6.517E-03)		N	99% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.989485	1.0000E+00	
	04/12/06 14:4:	3 TH-234	6052 20	!	746 500	GPC	30C (ОР	Y Y	N	4.4643E-01 (6.696E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.989485	1.0000E+00	
	- (1s Uncertainit	ies), Q - Quali	lier, U Res	sult is Les	s Than Lo	= 1.645 *	TPU				Page			#*************************************	*************************************		Reco	Ont:7 F	RADCALC v4.	8.
0	 Instrument Det 	ection Level in	Conc Uni	ts. MLcC	- Method	Decision I	evel in	Conc Ur Atl Bes	nits, MD	C- N	finimum Detectab ly Not be Significa	le Concentration	on e - mm/dd	/w/ hh-mm	24hr Time				TL Richland	

	Batch	Nbr: 60	60336			Α	lpha	Spe	c, T	hls	o by ALP	, C	alcula	ated	Result	S	· · · · · · · · · · · · · · · · · · ·	4/13	/2006 4:17	7:46 PN
s	Sq Ca	alc Date	Parameter	Avg	Sa Act	Q	Net (nt Rt	Dpm	Wo B	ik Dpm-Bik	vol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/iLc0	BIKLcC/M	DC StdDvN	/IdC/LcC
	04/	13/06	TH-228	R	0.00E00 (0.066442)	U4	0.0000		0.00E (0.01		0.00E00 (0.011516)	(0	1.00 0.027064		99%		0.147017	,		
	04/	13/06	TH-230	R	0.100956 (0.071773)	U4	4.0042 (2.8314		0.018 (0.013		0.018693 (0.013247)	· (C	1.00 0.02 7 064		99%		0.136795	5		
	04/	13/06	TH-232	R	0.00E00 (0.061822)	U4	0.0000		0.00E (0.01		0.00E00 (0.011447)) (0	1.00 0.027064		99%		0.136795	5		
	04/	13/06	TH-234	R	3642.638179 (219.296963)		3.0110 (3.890		674.4 (13.3				1.00 0.027064		99%					
Sq	Status	Method	Matrix	Protoco	ol Equation Set	Wri	c Ord	Units/N	latrix (QC/BE	Sa/On Date	AnalysisD	ate/PptW	t Sep1	Sep2 Date	QC/Tracer	Vial Mult/Ent\	/ld Total/Analy	Vol Final/C	ount Vo
	Calc 403,P 05		AIR	*STLE	AlpisoWoBS ,J6B270158			PCI/S/ AIR	4	02	/05/06 06:15	04/12/06	20:39	en samilyana A bahaya'i v 400 sa	olic (Pithaetha aith Mhórath a meanna	683.30 /	1 Alg_	1.00 S 0.083747 S		
Sc	q Cn	t Date	Parameter	Sam	ple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/12/	/06 16:29	TH-228	0 499.	1 4666666 998 .95		LP178	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0683E+00	0
1	04/12/	/06 16:29	TH-230	3 499.	. 0 4666666 998.95		LP178	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	0
2	04/12	/06 16:29	TH-232	1 499.4	, 1 4 <mark>666666</mark> 998.95		LP1 78	COP	N Y	N	2.9265E-01 (8.780E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.940792	1.0000E+00	0
3	04/12	/06 14:43	TH-234	5807 20	7 614 500	G	iPC30D	COP	Y Y		4.4610E-01 (6.691E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+0	0
S	eq C	alc Date	Parameter	Avg	Sa Act	Q	Net (Cnt Rt	Dpm	Wo B	lk Dpm-Bli	c Vo	Used		Yield,EnFc	t Chem Yid	EFctU IDC/ILco	C BIKLcC/N	IDC StdDvl	VidC/LcC
	04/	13/06	TH-228	R	-0.020847 (0.020903)	U4	-1.0010 (1.001		-0.000 (0.000)		-0.003628 (0.003632)) (0	1.00 0.027064		95%		0.250083 0.068586			
	04/	13/06	TH-230	R	0.116386 (0.067741)		6.0064 (3.467)		0.021 (0.012		0.021638 (0.012534)) (0	1.00 0.027064	0 Sa)	95%		0.105136	3		
	04/	13/06	TH-232	R	0.019398 (0.043398)	U4	1.0010 (2.238		0.003 (0. 00 8		0.003606 (0.008066)) (0	1.00 0.027064		95%		0.232696 0.063818			
	04/	13/06	TH-234	R	3486.010149 (210.064037)		2.8912 (3.810		648.1 (12.9				1.00 0.027064	OSa)	95%					
Sq	Status	Method	Matrix	Protoco	ol Equation Set	Wr	k Ord	Units/N	latrix 1	QC/BE	3 Sa/On Date	AnalysisD	ate/PptW	t Sep1	/Sep2 Date	QC/Trace	r Vial Mult/Ent	rid Total/Analy	Vol Final/C	ount Vo
	Calc 103,000		AIR	'STLE	AlpisoWoBS ,36B270158			PCI/S/ AIR	4	02	/05/06 06:05	04/12/06	20:39		allely empley the per personal de <u>an</u> ce	684.55	1 Arg	1.00 S 0.08283 S		·
Sc	Cn	t Date	Parameter	Sam	nple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/12/	06 16:29	TH-228	3 500.	0 0333333 1000.1		LP113	COP	N Y		2.5291E-01 (7.587E-03)		N	99% 4%	N	Marie Production of the Company of t	1.0000E+00 (0.000E+00)		1.0683E+0	0
	- Instru	ment Dete	ction Level in C	onc Un	sult is Less Than L its, MLcC - Method tion of Each Sr-89/5	d Decisi	on Level i					Concentration		Vyy hh:mn	n, 24hr Time	18 <u></u>	Reco		ADCALC v4	

I	Batch Nbr: 606	0336			F	الا	.Spe	ec, T	hls	o by ALP	, Cal	lcula	ited F	Results	i	4/	13/2006 4:	17:46 PN
	04/12/06 16:29		1 500.00	0 333333 1000.1		ALP113	COP	N Y		2.5291E-01 (7.587E-03)	î	N	99% 4%	N	1.0000E+00 (0.000E+00)		1.0000E+	00
!	04/12/06 16:29	TH-232	1 500.0	0 333333 1000.1		ALP113	COP	N Y		2.5291E-01 (7.587E-03)	!	N	99% 4%	N	1.0000E+00 (0.000E+00)		1.0000E+	00
;	04/12/06 15:07	TH-234	6119 20	640 500	G	GPC30A	COP	Y Y	N	4.4818E-01 (6.723E-03)	i	N	100%	Ν	1.0000E+00 (0.000E+00)		1.0000E+	00
s	q Calc Date	Parameter	Avg	Sa Act	Q	Net C	ont At	Dpn	Wo B	lik Dpm-Blk	Vol U	sed	,	Yield,EnFct	Chem Yld,EFctU IDC/ILc0	BikLc	MDC StdD	vMdC/Lc
	04/13/06	TH-228		0.139618 (0.081262)		5.9996 (3.4639		0.02	1033 3921)	0.024033) (0.013921)	(0.0	1.00 27064)		99%	0.126122			· .
	04/13/06	TH-230		0.043303 (0.043421)	U4	1.9998 (1.999		0.00	7963 7972	0.007963 (0.007972)	(0.0)	1.00 (27 <mark>064</mark>		99%	0.117352	2		
	04/13/06	TH-232		0.043303 (0.043421)	U4	1.9998 (1.9999		0.00	7963 7972	0.007963) (0.007972)	(0.0	1.00 (27 <mark>06</mark> 4)		99%	0.117352	2		
	04/13/06	TH-234	R	3696.867321 (222.497792)		3.0467 (3.911			79383 2191			1.00 (27064)		99%				
Sq	Status Method	Matrix P	rotoco	Equation Set	Wi	rk Ord	Units/	Matrix	QC/B	B Sa/On Date	AnalysisDate	e/PptWt	Sep1/	Sep2 Date	QC/Tracer Vial Mult/Ent\	∕ld Total/An	aly Vol Fina	I/Count \
	Calc S1 A	IR '	STLE	AlpisoWoBS			PCI/S	Α	02	2/05/06 06:40	04/12/06 2	0:40			1 685.30 Alq	1.0 0.08393	O Sa 2 Sa	
364	400,00000			,0027013		.0.10												
5364 S (Parameter	Sam	ole Cnt Bkgrn				Trc/A	v En	t Efficiency1	Efficiency 2	Ent	YId Fct	Ent E	Blk Value Ingr Fct	Conv Fct/Vol	Adj Decay	At
		Parameter TH-228	3	ole Cnt Bkgrn	d Cnt		Geom	Trc/A N Y		t Efficiency1 2.6103E-01 (7.831E-03)		Ent N	95% 3%	Ent E		4.5045E-01		
	Cnt Date	TH-228	3 500.1 3	2 833333 1000.	d Cnt .0666	Instr	Geom	N	N	2.6103E-01	-		95%		1.0000E+00 (0.000E+00)	4.5045E-01 11.914415 4.5045E-01	1.0683E	+00
	Cnt Date 04/12/06 16:30	TH-228 TH-230	3 500.1 3 500.1	2 833333 1000. 1 833333 1000. 0	0666 .0666	Instr ALP114	Geom COP	N Y N	N	2.6103E-01 (7.831E-03) 2.6103E-01		N	95% 3% 95%	N	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01	1.0683E	+00 +00
	04/12/06 16:30 04/12/06 16:30	TH-228 TH-230	3 500.1 3 500.1 0 500.1	833333 1000. 1 833333 1000. 0 833333 1000. 767	0666 .0666	Instr ALP114 ALP114	Geom COP COP	N Y N Y N Y	N N N	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01		N N	95% 3% 95% 3% 95%	N N	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415	1.0683E	+00 +00 +00
5 6	Cnt Date 04/12/06 16:30 04/12/06 16:30 04/12/06 16:30	TH-228 TH-230 TH-232	3 500.1 3 500.1 0 500.1	2 833333 1000. 1 833333 1000. 0	0666 .0666	ALP114 ALP114 ALP114 ALP114 GPC30B	Geom COP COP	N Y N Y N Y Y	N N N	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03)		N N N	95% 3% 95% 3% 95% 3%	N N N	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01	1.0683E	+00 +00 +00 +00
5 6	04/12/06 16:30 04/12/06 16:30 04/12/06 16:30 04/12/06 15:07	TH-228 TH-230 TH-232 TH-234	3 500.1 3 500.1 0 500.1 5990 20 Avg	2 833333 1000. 1 833333 1000. 0 833333 1000. 767 500	0666 .0666	ALP114 ALP114 ALP114 GPC30B Net	Geom COP COP COP COP	N Y N Y N Y Y Dp	N N N N	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03) Blk Dpm-Bli	c Vol L	N N N	95% 3% 95% 3% 95% 3% 100%	N N N	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00)	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 C BlkLc	1.0683E 1.0000E 1.0000E	+00 +00 +00 +00
S (1)	Cnt Date 04/12/06 16:30 04/12/06 16:30 04/12/06 16:30 04/12/06 15:07 Sq Calc Date	TH-228 TH-230 TH-232 TH-234 Parameter	3 500.1 3 500.1 0 500. 5990 20 Avg	2 833333 1000. 1 833333 1000. 0 833333 1000 767 500 Sa Act 0.092818 (0.087111) 0.107967	0666 .0666 .0666	ALP114 ALP114 ALP114 GPC30B Net 3.9978 (3.740) 4.9978	Geom COP COP COP Cnt Rt 93E-03 4E-03)	N Y N Y Y Y Dp:	N N N N m Wo	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03) Blk Dpm-Bll 0.01619 (0.015166) 0.020117	د Vol L) (0.0	N N N N Used	95% 3% 95% 3% 95% 3% 100%	N N N N Yield,EnFct	1.0000E+00 (0.000E+00) 1.0000E+00) (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yid,EFctU_IDC/ILc	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 C BIRLO	1.0683E 1.0000E 1.0000E	+00 +00 +00 +00
S (1)	04/12/06 16:30 04/12/06 16:30 04/12/06 16:30 04/12/06 15:07 Sq Calc Date 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228	3 500.1 3 500.1 0 500.5 5990 20 Avg	833333 1000. 833333 1000. 833333 1000. 767 500 Sa Act 0.092818 (0.087111) 0.107967 (0.078271) 0.00E00	0666 .0666 .0666 U4	ALP114 ALP114 ALP114 GPC30B Net 3.9978 (3.740 4.9978 (3.604	Geom COP COP COP Cort Rt 93E-03 (4E-03) 37E-03 (3E-03)	N Y N Y Y P P P P P P P P P P P P P P P	N N N N 619 15166	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03) Blk Dpm-Bli 0.01619 (0.015166) 0.020117 9) (0.014539 0.00E00	(Vol L) (0.0	N N N N Used 1.00 027064 1.00	95% 3% 95% 3% 95% 3% 100% 0 Sa)	N N N N Yield,EnFct	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yid,EFctU IDC/ILc 0.34165 0.10799 0.25907	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 C BlkLd	1.0683E 1.0000E 1.0000E	+00 +00 +00 +00
5 60	Cnt Date 04/12/06 16:30 04/12/06 16:30 04/12/06 16:30 04/12/06 15:07 Sq Calc Date 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230	3 500.1 3 500.1 0 500.5 5990 20 Avg	Bassass 1000. 833333 1000. 833333 1000. 833333 1000. 767 500 Sa Act 0.092818 (0.087111) 0.107967 (0.078271)	0666 .0666 .0666 .04	Instr ALP114 ALP114 ALP114 GPC30B Net 3.9978 (3.740 4.9978 (3.604 0.0000 2.9796	Geom COP COP COP Cont Rt 93E-03 94E-03) 93FE-03 93E-03)	N Y N Y Y Y Dpr (0.0 0.02 (0.0 (0.0 (0.0	N N N N 619 15166 0117 14539 E00	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03) Blk Dpm-Bll 0.01619 (0.015166) 0.020117 (0.014539 0.00E00 6) (0.009856	(Vol L) (0.0) (0.0) (0.0	N N N N Used 1.00 027064 1.00 027064 1.00	95% 3% 95% 3% 95% 3% 100% O Sa) O Sa) O Sa	N N N N Yield,EnFct 95%	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yid,EFctU IDC/ILc 0.34165 0.10799 0.25907 0.07105	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 C BlkLd	1.0683E 1.0000E 1.0000E	+00 +00 +00 +00
5 6	Cnt Date 04/12/06 16:30 04/12/06 16:30 04/12/06 16:30 04/12/06 15:07 Sq Calc Date 04/13/06 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230 TH-230 TH-232 TH-234	3 500.1 3 500.1 0 500.5 5990 20 Avg R	0.092818 (0.0978271) 0.0052896) 3500.457078 (212.063214)	0666 .0666 .0666 U4	Net 3.9978 (3.604) 4.9978 (3.604) 0.0000 (0.000 2.9796 (3.870	Geom COP COP COP COP Cnt Rt 93E-03) 37E-03 37E-03 00E+00) 00E+00) 66E+02 02E+00)	N Y N Y Y Y Dpr (0.0 0.02 (0.0 (0.0 (0.0	N N N N N 15166 0117 14539 E00 09856 2370	2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 2.6103E-01 (7.831E-03) 4.5684E-01 (7.492E-03) Blk Dpm-Bll 0.01619 (0.015166) 0.020117 (0.014539 0.00E00 6) (0.009856	(Vol L) (0.0) (0.0) (0.0) (0.0 4) (0.0	N N N N Used 1.00 027064 1.00 027064 1.00	95% 3% 95% 3% 95% 3% 100% O Sa) O Sa) O Sa	N N N N Yield,EnFct 95% 95%	1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) 1.0000E+00 (0.000E+00) Chem Yid,EFctU IDC/ILc 0.34165 0.10799 0.25907 0.07105 0.11704	4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 4.5045E-01 11.914415 C BlkLd	1.0683E 1.0000E 1.0000E	+00 +00 +00 +00 DVMdC/L

	Batch Nbr: 6	060336					Alpha	. Spe	c, T	hls	o by ALF	• , C	alcula	ated I	Result	S		4/13	3/2006 4:17:4	46 PI
Sq.	Status Method	Matrix I	Protocol	I Equation	on Set	W	rk Ord	Units/M	atrix (QC/B	B Sa/On Date	AnalysisDa	ate/PptWi	Sep1/	Sep2 Date	QC/Trace	r Vial Mult/EntY	ld Total/Analy	Vol Final/Cou	unt V
	Calc S1 103,000359	AIR	*STLE	AfplsoV JGE	VoBS 3270158			PCI/SA AIR	\	02	2/05/06 07:20	04/12/06	20:40			688.54	1 Aiq	1.00 \$ 0.084039 \$		
Sc	Cnt Date	Parameter	Sam	ple Cnt	Bkgrnd	Cnt	Instr	Geom	Trc/Av	En	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abr
)	04/12/06 16:30) TH-228	3 500.3	3166666	4 1000.1		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.899177	1.0682E+00	
	04/12/06 16:30	TH-230	9 500.3	3166666	1 1000.1		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0000 E +00	
2	04/12/06 16:30	TH-232	0 500.3	3166666	0 1000.1		ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/12/06 15:0	7 TH-234	5894 20		7 4 6 500		GPC30C	COP	Y Y	N	4.4643E-01 (6.696E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
9	q Calc Date	Parameter				Q	Net (Ont Rt	Dpm	Wo E	Blk Dpm-B	lk Vo	l Used		Yield,EnFo	t Chem Yld	JEFetU IDC/ILeC		ADC StdDvMc	IC/Lc/
	04/13/06	TH-228	R	0.05901 (0.1182		U4	1.9967		0.010		0.010306) (0.02064		1.0	DSa ·)	95%		0.548625 0.194388		_	
	04/13/06	TH-230		0.46719 (0.1706			1.6988 (6.079		0.087 (0.03		0.08 7 163) (0.03145		1.0 0.027064	0 Sa .)	95%		0.32973 0.090441			
	04/13/06	TH-232		0.00E00 (0.0673		U4	0.0000	0E+00 0E+00)	0.00E (0.01		0.00E00) (0.01255	9) (0	1.0 0.027064	0 Sa -)	95%		0.148956	3		
	04/13/06	TH-234		3520.35 (212.06				08E+02 0E+00)	656.7 (13.0				1.0 0. 0270 64	0 Sa -)	95%					
Sq	Status Method	Matrix	Protoco	ol Equati	on Set	W	/rk Ord	Units/N	latrix	QC/B	B Sa/On Date	AnalysisD	ate/PptW	t Sep1	/Sep2 Date	QC/Trace	er Vial Mult/Ent\	/ld Total/Analy	/Vol Final/Co	unt V
	Calc S1 403,000360	AIR	*STLE	Alpiso\ 6L,	N oB S B270158			PCI/S/ AIR	4	0:	2/05/06 07:50	04/12/06	3 20:40		17 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg - 1 kg	685.55	Alq -	1.00 S 0.083782 S		
S	Cnt Date	Paramete	r Sam	ple Cnt	Bkgrnd	Cnt	instr	Geom	Trc/Av	/ En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	ij Decay	Ab
0	04/12/06 16:3	0 TH-228		_ 1166666			ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)		1.0682E+00	
1	04/12/06 16:3	0 TH-230	74 500.	- 1166666	1 2500.0	0333	ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.935 7 13	1.0000E+00	
2	04/12/06 16:3	0 TH-232		, 1166666	0 2500.0		ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	95% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.935713	1.0000E+00	
3	04/12/06 15:0	7 TH-234	5853 20	3	614 500		GPC30D	COP	Y Y	N	4.4610E-01 (6.691E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 11.935713	1.0000E+00	
()	- (1s Uncertaini										Page			*			Rect	Ont:12	RADCALC v4.	8.18
IDC Sr-I	: - Instrument De 39 Counts are De	tection Level in (erived from the C	Conc Uni	its, MLcC	- Metho	d Deci	ision Level d Y-90 Cou	in Conc L int. All Re	Jnits, M esult Dig	DC- N its Ma	finimum Detectat av Not be Significa	ole Concentrati ants, Date/Tim	ian ne - mm/de	d/γγ hh:mr	n, 24hr Time	;		;	STL Richland	

ا	Batch N	Nbr: 606	0336				Alpl	na Sp	ec, T	hls	o by ALP	, C	alcula	ated	Result	S		4/13/	′2006 4:17:4	47 PM
S	iq Calc	Date	Parameter	Avg	Sa A	et C	-	et Cnt Rt		Wo B	•		l Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILcC	BikLcC/MI	C StdDvMd	C/LcC
	04/13	3/06	TH-228	R	0.6916 (0.1857			930E-02 442E-03)	0.120	423 1601)	0.120423 (0.031601)) (0	1.00		95%	·	0.12495			
	04/13	3/06	TH-230	R	3.1663 (0.4367			7565E-01 205E-02)	0.588 (0.07	925 4007)	0.588925 (0.074007)) (0	1.00 (027064)		95%		0.205501 0.044642			
	04/13	3/06	TH-232	R	0.6006	58		9935E-02 816E-03)	0.111	.72 0314)	0.11172 (0.030314) (r	1.00 (1.027064)		95%		0.11627			
	04/13	3/06	TH-234	R	3512.2 (211.60	47148	2.91	1422E+02 (256E+00)	653.2	26608 21551	4 653.26608	34	1.00 1.00 (0.027064)	Sa	95%					
q	Status N	lethod I	Jatrix	Protoco	ol Equa	·	Wrk Ord				B Sa/On Date	AnalysisD			/Sep2 Date	QC/Tracer	Vial Mult/EntY	d Total/Analy	/oi Final/Co	unt Vol
	Calc S		ĪR	*STLE	-	WoBS HX 6B270158-13		A PCI/S	SA .	02	2/05/06 08:20	04/12/06	5 20:40			685.05 A	1 Ng	1.00 Sa 0.082848 Sa		
Sc	g Cnti	Date	Parameter	r Sam	nple Cnt	Bkgrnd Cn	t Instr	Geon	Trc/A	v Ent	Efficiency1	Efficiency 2	. Ent	YId Fct	Ent	Bik Value	Ingr Fet	Conv Fct/VolAdj	Decay	Abn
)	04/12/0	6 16:30	TH-228	10 500.		1	ALP1	19 COP	N Y	N	2.0125E-01 (6.037E-03)	, , , , , , , , , , , , , , , , , , ,	N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0682E+00	
1	04/12/0	6 16:30	TH-230	40 500.		0 1000	ALP1	19 COP	N Y		2.0125 E- 01 (6.037 E- 03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
5	04/12/0	6 16:30	TH-232	15 500.		0 1000	ALP1	19 COP	N Y		2.0125E-01 (6.037E-03)		N	98% 4%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/12/0	6 15:29	TH-234	605 20		640 500	GPC3	30A COP	Y Y	N	4.4818E-01 (6.723E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
5	Sq Cal-	c Date	Parameter		g Sa		a 1	let Cnt Rt	·-	ı Wa E	,	k Vo	ol Used		Yield,EnFc	t Chem Yld	EFctU IDC/ILeC		DC StdDvMc	dC/LcC
***	04/1	3/06	TH-228	R	0.5613 (0.193			9980E-02 4025E-03)		6657 32887)	0.096657) (0.032887	") ((1.00 0.027064) Sa	98%		0.35444 0.097209			
	04/13	3/06	TH-230	R	2.1994			9920E-02 2648E-02)		4537 66707)	0.404537) (0.066707	r) (i	1.0 0.027064) Sa)	98%		0.149016			
	04/1	3/06	TH-232	R	0.8248			9970E-02 7452E-03)		1701 39808	0.151701) (0.039808	3) (1	1.0 0.027064) Sa)	98%		0.149016			
	04/1:	3/06	TH-234	R	3659.6 (220.3	586121 (10104)		1670E+02 8923E+00		10009 31778			1.0 0.027064	0 Sa .)	98%					
Sq	Status	Method	Matrix	Protoc	ol Equa		Wrk Ore	d Units	/Matrix	QC/B	B Sa/On Date	Analysist	Date/PptW	t Sep1	/Sep2 Date	QC/Trace	r Vial Mult/EntY	'id Total/Analy	Vol Final/Co	ount Vo
	Calc :		AIR	*STLI		oWoBS H 968270158-14	X8171A 4 v4.8.18	A PCI/	SA	02	2/05/06 08:45	04/12/0	6 20:41			682.80	1 Alq –	1.00 S 0.083106 S		-
s	iq Cnt	Date	Paramete	r Sar	nple Cnt	Bkgrnd Ci	nt Instr	Geor	n Trc/A	v En	t Efficiency1	Efficiency 2	2 Ent	Yid Fct	Ent Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Abn
0	04/12/0	06 16:31	TH-228	4 500		2 6 1000.066		20 COP	N Y	N	1.9421E-01 (5.826E-03)		N	94% 3%	N		1.0000E+00 (0.000E+00)		1.0682E+00)
() (DC	🗅 - Înetrur	nant Data	s), Q - Qualification Level in the C	Conc Hi	nits Mile	C - Method f	ecision L	evel in Cond	: Units, N	ADC- N	Page Jinimum Detectab ay Not be Significa	le Concentrat	lion	I/w hh:m	m. 24hr Time		Rec0		RADCALC v4. TL Richland	

В	atch Nbr: 606	0336			A	Ipha	Spec	, Tr	ıls	o by ALP	, Cal	cula	ited F	Results			4/13/2	006 4:17:47
0	4/12/06 16:31	TH-230	2 500.10	0 666666 1000.06	Al	LP120 C	ОР		N ·	1,9421E-01 (5.826E-03)	f	V	94% 3%	N	1.0000E+0 (0.000E+0			0000E+00
C	4/12/06 16:31	TH-232	1	0 866666 1000.06	A	LP120 (N Y		1.9421E-01 (5.826E-03)	ı	N	94% 3%	Ν	1.0000E+0 (0.000E+0			0000E+00
C	4/12/06 15:29	TH-234	5885 20	767 500		iPC30B (OP	Y Y		4.5684E-01 (7.492E-03)	1	N	100%	N	1.0000E+0 (0.000E+0			0000E+00
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net Cr	t Rt	Dpm V	Vo BI	ik Dpm-Bik	Vol U	sed	,	Yield,EnFct	Chem Yld,EFctU IDC/II	.cC I	BikLcC/MD(C StdDvMdC
	04/13/06	TH-228		0.191675 (0.136291)	U4	5.99747 (4.2414E		0.0331 (0.023		0.033106 (0.023465)	(0.0)	1.00 27064)		94%	0,4703 0.1486			
	04/13/06	TH-230	R	0.118922 (0.08455)	U4	3.99867 (2.8275)		0.0219 (0.015		0.02194 (0.015549)	(0.0	1.00 (27064		94%	0.1611	39		
	04/13/06	TH-232	R	0.059461 (0.059623)	U4	1.99933 (1.99931		0.0109 (0.010		0.01097 (0.010983)	(0.0	1.00 (27064		94%	0.161	139		
	04/13/06	TH-234	R	3472.968385 (210.485144)		2.92716 (3.83611		640.74 (13.45				1.00 (27064		94%				
q S	tatus Method	Matrix F	rotoco	I Equation Set	Wr	k Ord	Units/Ma	trix C	C/BE	3 Sa/On Daté	AnalysisDate	e/PptWi	t Sep1/	Sep2 Date	QC/Tracer Vial Mult/E	ntYld To	tal/Analy V	ol Final/Cou
		AIR .	*STLE	AlpisoWoBS		-	PCI/SA		02	2/05/06 06:45	04/13/06 1	0:42		and the second s	1 684.30 Alq	0.0	1.00 Sa 83252 Sa	
64(3,000363			,300270130-		.0.10	AID											
	·	Parameter	Sam	ple Cnt Bkgrnd				Trc/Av	Ent	t Efficiency1 I	Efficiency 2	Ent	Yld Fct	Ent E	3ik Value Ingr Fct	Conv F	ct/VoIAdj	Decay
Sq			1 /	ple Cnt Bkgrnd	Cnt		Geom	Trc/Av N Y		2.5291E-01 (7.587E-03)		Ent N	90% 3%	Ent E		00 4.504	5E-01 1	Decay .0689E+00
Sq	Cnt Date	TH-228	1 500.1	0 1833333 1000.1 0	Cnt	Instr	Geom COP	N	N	2.5291E-01	-		90%		1.0000E+	00 4.504 00) 12.01 00 4.504	5E-01 1 1754 :5E-01 1	
Sq	Cnt Date 04/13/06 06:32	TH-228 TH-230	1 500.1 0 500.1	0 1833333 1000.1 0 1833333 1000.1 0	Cnt A	Instr ALP113	Geom COP	N Y N	N	2.5291E-01 (7.587E-03) 2.5291E-01	-	N	90% 3% 90%	N	1.0000E+ (0.000E+ 1.0000E+	00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504	5E-01 1 1754 5E-01 1 1754	.0689E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32	TH-228 TH-230 TH-232	1 500.1 0 500.1 0 500.1	0 833333 1000.1 0 1833333 1000.1 0 1833333 1000.1 746	Cnt A	Instr ALP113 ALP113	Geom COP COP	N Y N Y N Y	N N	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01	-	N N	90% 3% 90% 3% 90%	N N	1.0000E+ (0.000E+ 1.0000E+ (0.000E+	00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01	5E-01 1 1754 5E-01 1 1754 5E-01 1 1754	.0689E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/13/06 06:32	TH-228 TH-230 TH-232	1 2 500.1 0 500.1 0 500.1 5526 20	ple Cnt Bkgrnd (Cnt A	Instr ALP113 ALP113 ALP113	Geom COP COP	N Y N Y N	N N N	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03)	madd 8-41 verse er er er	N N	90% 3% 90% 3% 90% 3%	N N N	1.0000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+	00 4.504 00) 12.01 00 4.504 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01	5E-01 1 1754	.0000E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/13/06 06:32 04/12/06 15:29	TH-228 TH-230 TH-232 TH-234	1 500.1 0 500.1 0 500.1 5526 20 Avg	ple Cnt Bkgrnd (Cnt ,,	Instr ALP113 ALP113 ALP113 GPC30C	Geom COP COP COP int Rt 7E-03	N Y N Y N Y Y Y	N N N Wo E	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Blk Dpm-Blk	Voi	N N N N	90% 3% 90% 3% 90% 3% 100%	N N N	1.0000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ 1.0000E+ (0.000E+	00 4.504 00) 12.01 00 4.504 12.01 00 4.504 12.01 00 4.504 00) 12.01	5E-01 1 1754	.0000E+00 1.0000E+00 1.0000E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 q Calc Date	TH-228 TH-230 TH-232 TH-234 Parameter	1 500.1 0 500.1 0 500.1 5526 20 Avg	ple Cnt Bkgrnd (Cnt ,,	Instr ALP113 ALP113 ALP113 GPC30C Net C	Geom COP COP COP int Rt 7E-03 E-03) DE+00	N Y N Y N Y Y Dpm	N N N N Wo E 841 8851	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) Blk Dpm-Blk 0.008841) (0.008851)	Vol (N N N N Used 1.0 027064	90% 3% 90% 3% 90% 3% 100%	N N N N Yield,EnFct	1.0000E+ (0.000E+ 1.0000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+	00 4.504 00) 12.01 00 4.504 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 1LeC	5E-01 1 1754	.0000E+00 1.0000E+00 1.0000E+00
P	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 q Calc Date 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228	1 500.1 0 500.1 0 500.1 5526 20 Avg	ple Cnt Bkgrnd (Q U4	Instr ALP113 ALP113 ALP113 ALP113 GPC30C Net C 1.9992 (1.9993	Geom COP COP COP int Rt 7E-03 (E-03) (E+00) (E+00) (E+00)	N Y N Y Y Y Dpm 0.008 (0.008	N N N N Wo E 841 3851 500 0763	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) 8lk Dpm-Blk 0.008841) (0.008851) 0.00E00 0.00E00	Vol (0.0)	N N N N Used 1.0 027064 1.0 027064	90% 3% 90% 3% 90% 3% 100%	N N N N Yield,EnFct	1.0000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ Chem Yld,EFctU_IDC/	00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504	5E-01 1 1754	.0000E+00 1.0000E+00 1.0000E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 q Calc Date 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230	1 500.1 0 500.1 0 500.1 5526 20 Avg	ple Cnt Bkgrnd (Q U4	Instr ALP113 ALP113 ALP113 ALP113 GPC30C Net C 1.9992 (1.9993 0.00000 (0.00000	Geom COP COP COP TH Rt 7E-03 (E-03) (E+00) (E+00) (E+00) (E+00) (E+00)	N Y N Y Y Y Dpm 0.008 (0.006 (0.010	N N N N N 841 8851 600 00763 66798	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) 3lk Dpm-Blk 0.008851) 0.00E00 (0.010763) 0.00E00 (0.010763) 5 615.56795	(0.) (0.) (0.)	N N N N Used 1.0 027064 1.0 027064 1.0	90% 3% 90% 3% 90% 3% 100% 0 Sa 4) 00 Sa 4)	N N N N Yield,EnFct 90%	1.0000E+ (0.000E+ (0.000E+ (0.000E+ 1.0000E+ (0.000E+ (0.000E+ (0.000E+ Chem Yld,EFctU_IDC/ 0.138	00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504	5E-01 1 1754	.0000E+00 1.0000E+00 1.0000E+00
Sq	Cnt Date 04/13/06 06:32 04/13/06 06:32 04/13/06 06:32 04/12/06 15:29 q Calc Date 04/13/06 04/13/06 04/13/06	TH-228 TH-230 TH-232 TH-234 Parameter TH-228 TH-230 TH-232 TH-232	1 500.1 0 500. 0 500. 5526 20 Avg	ple Cnt Bkgrnd (Q U4 U4	Instr ALP113 ALP113 ALP113 ALP113 ALP113 GPC30C Net C 1.9992: (1.9993 0.00000 0.00000 0.00000 2.74800 (3.7173	Geom COP COP COP TH Rt 7E-03 (E-03) (E+00) (E+00) (E+00) (E+00) (E+00)	N Y N Y Y Y Dpm 0.008 (0.006 (0.010 615.5	N N N N N 841 8851 600 00763 66798	2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 2.5291E-01 (7.587E-03) 4.4643E-01 (6.696E-03) 3lk Dpm-Blk 0.008851) 0.00E00 (0.010763) 0.00E00 (0.010763) 5 615.56795	(0. (0. (0. (0.	N N N N Used 1.0 027064 1.0 027064 1.0	90% 3% 90% 3% 90% 3% 100% 0 Sa 4) 00 Sa 4)	N N N N Yield,EnFct 90% 90%	1.0000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ (0.000E+ Chem Yld,EFctU_IDC/ 0.138	00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504 00) 12.01 00 4.504	5E-01 1 1754	.0000E+00 1.0000E+00 1.0000E+00

	Bato	ch Nbr: 60	60336				Alpi	na S	Spec	;, TI	hls	o by ALF	, C	alcul	ated I	Result	S		4/1:	3/2006 4:17:	47 PI
q	Statu	ıs Method	Matrix I	Protoco	l Equati	on Set	Wrk Ord	IJ	nits/Ma	trix C	C/BI	B Sa/On Date	AnalysisD	ate/PptW	t Sep1/	Sep2 Date	QC/Tracer	Vial Mult/EntY	'id Total/Analy	Vol Final/Co	unt Va
	Calc TRA-L	S1 LAB BLANK	AIR	*STLE		WoBS H0 5C010000-33		A P	CI/SA R	В	02	2/05/06 06:00	04/13/06	10:42			684.05 A	1 Ng	1.00 S 1.00 S		
Sc	1 (Cnt Date	Parameter	Sam	pie Cnt	Bkgrnd Cn	Instr	G	eom T	rc/Av	Ent	Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abr
l	04/1	13/06 06:32	TH-228	2 500.2	2	2	ALP1	14 C		N Y	N	2.6103E-01 (7.831E-03)		N	93% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0689E+00	
	04/1	13/06 06:32	: TH-230	3 500.2		1000.066	ALP1	14 C		N Y	N	2.6103E-01 (7.831E-03)		N	93% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
:	04/1	13/06 06:32	TH-232	0 500.2		0	ALP1	14 C		N Y	N	2.6103E-01 (7.831E-03)		N	93% 3%	N			4.5045 E -01	1.0000 E +00	
3	04/1	12/06 15:29	TH-234	5699 20		614 500	GPC3	OD C	P	Y Y	N	4.4610E-01 (6.691E-03)		N	100%	N			4.5045E-01	1.0000E+00	
5	Sq	Calc Date	Parameter		Sa A) N	let Cnt		Dpm	Wo E	,	lk Vo	l Used		Yield,EnFc	t Chem Yld	,EFctU IDC/ILc		MDC StdDvMd	dC/LcI
	0)4/13/06	TH-228	R	0.0039		U4 1.99 (3.1	9853E 612E-		0.008		0.008284 (0.01311)	(0	1.0	10 Sa 1)	93%		0.02937			
	0	4/13/06	TH-230	R	0.0092	- -	U4 4.99 (3.6	9767E 6042E-		0.020! (0.014		0.020592) (0.014882		1.0 0.01732	0 Sa 1)	93%		0.022258 0.006108			
	0)4/13/06	TH-232	R	0.00E0 (0.0045		U4 0.00 (0.0	0000E		0.00E (0.010		0.00E00) (0.010089	9) (0	1.0 0.01732	00 Sa 1)	93%		0.01005	3		
	o	04/13/06	TH-234	R	286.48 (16.211			3722E 7 74 9E-		636.00 (12,75				1.0 0.01732	10 Sa 1)	93%					
Sq	Stati	us Method	Matrix	Protoco	e Equat	ion Set	Wrk Ord	l L	lnits/Ma	trix (QC/B	B Sa/On Date	Analysis0	ate/PptV	t Sept.	/Sep2 Date	QC/Trace	rVial Mult/Ent'	Yid Total/Anal	y Voi Final/Co	ount V
	Calc TRA-	S1 LAB CHECK	AIR	*STLE	•	WoBS H			CI/SA IR	S	02	2/05/06 06:00	04/13/06	3 10:42			3.9950 359.37	1 Aiq _	1.00 \$ 1.00 \$		
S	q	Cnt Date	Paramete	r Sam	ple Cnt	Bkgrnd Cn	t instr	G	ieom 1	rc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAd	dj Decay	Ab
ס	04/	13/06 06:32	2 TH-228	1 500.0	0666666	4 3 1000.133	ALP1	16 C	OP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 4%	N		1.0000E+00 (0.000E+00)		1.0689E+00	
1	04/	13/06 06:32	2 TH-230	398 500.		1 5 1000.133		16 C	OP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00)
2	04/	13/06 06:32	2 TH-232	0 500.0	066666	0 3 1000.133		16 C	OP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 4%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
	04/	12/06 16:13	3 TH-234	2995 20	5	640 500	GPC3	30A C	OP	Y Y	N	4.4818E-01 (6.723E-03)		N	100%	N		1,0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	
() (DC	- Ins	strument Dete	es), Q - Qualifi ection Level in (Conc Un	its, MLc0	C - Method D	ecision Le	evel in 0	Conc Un	its, MC	DC- N	Page dinimum Detectab ay Not be Significa	le Concentrati	on				Rec		RADCALC v4.	

Ba:					F	Alpha Spe	c, Thiso	by ALP	, Calculated	Results	3	The subsection and one of the size of the subsection of the subsec	A/13/20	06 4:17:47 PN
			Avg	Sa Act	Q	Net Cnt Rt	Dpm Wo Bik	Dpm-Blk	Vol Used	Yield.EnFct	Chem Vid EE	etU IDC/ILcC		
	04/13/06	TH-228	R	-0.005143 (0.007282)	U4	-1.99973E-03 (2.8281E-03)	-0.010681 (0.015114)	-0.010681 (0.015114)	1,00 Sa (0.017321)	92%	onem ma,ci	0.047756	BlkLcC/MDC	StdDvMdC/LeC
	04/13/06	TH-230	R	1.90097 (0.16665)		7.94894E-01 (3.9907E-02)	4.220159 (0.294966)	4.220159 (0.294966)	1.00 Sa (0.017321)	92%	106%	0.016919	·	
	04/13/06	TH-232		0.00E00 (0.005857)	U4	0.00000E+00 (0.0000E+00)	0.00E00 (0.013003)	0.00E00 (0.013003)	1.00 Sa (0.017321)	92%		0.00786 7 0.01296		
(04/13/06	TH-234	R	149.22199 (8.655889)		1.48470E+02 (2.7368E+00)	331.273149 (7.872795)	331.273149 (7.872795)	1.00 Sa (0.017321)	92%				

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 *TPU Page 11

(C) - (Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC-Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

STL Richland

Thorium Yield Determination by Beta-emitting Th-234 tracer

Reference Tracer Data: Ref. Date: 24-Feb-06

		Trem Batter							
	Beta	Gross	Count	Bkg	Bkg	Bkg	Grams	SrY-90	DPM/g of
Ref. ID	Detector	Counts	Time	Counts	Time	CPM	Found	Eff	Tracer
CALS/34	-30A	1681	20	- 640	500	1:2800	0.0757	0,4482	2439,61
CAL5735	30B	2308	20	767	500	1.5340	0.0762	0.4568	3270.98
CAL5736		1500	20	746	500	1.4920	0.0749	0.4464	2198.34
CAL5737	30D	1401⁄	20	614	500	1.2280	0.0744	0.4461	2073.58
							Average DPI	M/g of tracer =	2495.63

Sample Trace	r Data:	
	Trace	DPM
VIAL ID	Mass	Tracer
##JHT 09385	0,2735	682.65
THTC9386	0.2741	
#####G9\$87		697,00
THTC9388	0.2741	
#F 1:09389	0.2744	684.80
THTC9390	0.2743	684.55
. THE 18391	024	684.05
THTC9392	0.2738	683.30
A THT 69398	0.2740	684.55
THTC9394	0.2746	685.30
#THT C9395	0.2759	688.54
THTC9396	0.2747	685.55
1105697	0.2745	685.05
THTC9398	0.2736	682.80
THTC9399	0.2742	684.30
THTC9400	0.2741-	684.05
THSH0232	0 144	35987
		0.00
		0.00
		0.00
	The second	0.00
		0.00
Partie Car		.4 10.00
		0.00
		40.00
		0.00
		0.00
		0.00
traquities :		0.00
		0.00

FORM NO. RC-103, REV. 2, 10/95

STL RICHLA	SEVERN TRENT C.R. Technician Date Counted	'L		THO Counting T Sample		500	IC COUNT SOP'S Minutes Opera		_	- 4/13 - 0050
	Date Counted			Backgroun	d <u>See Al</u>	pha Analysis Report	2/5/06	v: <u>RICHRDOC</u> 606 0 3		
			Th-229 (4 Tra				TOTAL COUNTS			
į	_		from Th-234 (Beta Count (7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
}	WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
	HX8/N/AA		10		0	See Alpha	Analysis Report for ROI	Information	17/	
	HX81Q1AA		10		0	See Alpha	Analysis Report for ROI	Information	172	
_	11 - 51 0 () 1		10		0	See Alpha	Analysis Report for ROI	Information	173	
130	HX81TIAA		10		0	See Alpha	Analysis Report for ROI	Information	174	
	HX81VIAA		10		0	See Alpha	Analysis Report for ROI	Information	175	
	HX8/W/AA		10		0	See Alpha	Analysis Report for ROI	Information	176	
	HX81X/AA		10		0	See Alpha	Analysis Report for ROI	Information	177	
	HX8111A-A		10		0	See Alpha	Analysis Report for ROI	Information	178	
			10		0	See Alpha	Analysis Report for ROI	Information		

Comments:

Approved by:

Date: 18/04

STL RI	SEVERN ST					N ISOTOP		ING REQI	JEST	4/13
CH	C.R. Technician 6/17	100		Counting T	<u>ime</u>	500 A	SOP's Ainutes Opera	ting: RICHRDO	08	
[AND	C.R. Technician Date Counted C.R. Analyst Date Analyzed 1/13/154					pha Analysis Report	•	J		6
			Th-229 (4 Tra				TOTAL COUNTS		_	
			from Th-234 (Beta Count ((7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
	HX8121AA		10		0	See Alpha .	Analysis Report for ROI	Information	1/3	
	HX813/AA		10		Ó .: 5.	See Alpha	Analysis Report for ROI	Information	114	
_	H X 814 1A-A		10		0	See Alpha	Analysis Report for ROI	Information	116	
195	HX8151AA		10		0	See Alpha	Analysis Report for ROI	Information	117	
	HX8161AA		10		0	See Alpha	Analysis Report for ROI	Information	119	
	HX8171A-A		10		0	See Alpha	Analysis Report for ROI	Information	120	
			10		0	See Alpha	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		
	Comments:			<u> </u>						

Form No: RC-012, 10/02, Rev 9

Approved by:

Date: 4/3/4

STL RICHLAND	SEVERN TRENT C.R. Technician Date Counted C.R. Analyst Date Analyzed		· -	Counting T Sample _	<u>Time</u>	M ISOTOP: 570 pha Analysis Report	5OP's Minutes Opero	iting: <u>RICHRDOC</u>	<u>08</u>	4/10 MSE
			T h-229 (4 Tra from Th-234 I	cer	7)	Th-228 (5423 KeV)	TOTAL COUNTS Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
	HX 8181AA		10		0	See Alpha 1	Analysis Report for ROI	Information	//3	
	HX8181AA HOEP81AA HOEP81AC		10		Ó	See Alpha A	Analysis Report for ROI	Information	114	
250	HOEP 81AC		10		0	See Alpha A	Analysis Report for ROI	Information	114	
0			10		0	See Alpha /	Analysis Report for ROI	Information		
			10		0	See Alpha A	Analysis Report for ROI	Information		
			10		0	See Alpha A	Analysis Report for ROI	Information		
			10		0	See Alpha /	Analysis Report for ROI	Information		
			10		O	See Alpha A	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		

Form No: RC-012, 10/02, Rev 9

Comments:

	a 10	
Approved by:	ON	D

Date: 4/13/06

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

4/24/2006 4:31:04 PM

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6110472; RTHISO Thiso by ALP

SDG, Matrix:

1.0 COC

31025; FILTER

٠.	•	 1110	1000	

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

es No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yeş No N/A ♥ Yeş No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

₩′ Yeş No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yeş No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

V.

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A

4.2 Were analysis volumes entered correctly?

Yes No N/A

4.3 Were Yields entered correctly?

Yes No N/A

No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

Yes

4.5 Were raw counts reviewed for anomalies?

No NA

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

5.2 Are all required forms filled out?

5.3 Was the correct methodology used?

Yes No N/A

Yes No N/A

5.4 Was transcription checked?

Yes No N/A

5.6 Are worksheet entries complete and correct?

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

No N/A

- 6.0 Comments on any No response:
 - See NCM.

10-07904

First Level Review

anderson

Date 424.66

STL Richland
OAS_RADCALCv4,8,18

Page 1



Data Review Checklist RADIOCHEMISTRY Second Level Review

	6110472
OC Batch Number:	0110112

Review Item	Yes (V)	No (V)	$N/A(\sqrt{)}$
A. Sample Analysis		1	ļ.
Are the sample yields within acceptance chtena?		<u> </u>	_
2. Is the sample Minimum Detectable Activity < the Contract			.
Detection Limit?	1		
3. Are the correct isotopes reported?		 	
R OC Samples	1	ļ	ļ
1. Is the Minimum Detectable Activity for the blank result ≤ the			Ì
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?		- 	
3. Is the blank result < the Contract Detection Limit?		 	
4. Is the blank result > the Contract Detection Limit but the sample			/
result < the Contract Detection Limit?	+		
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection	" _/		
Limit?		-	
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other		}	
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?	+/		
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?	<u></u>		
Comments on any "No" response: Sec 11 CM	<u>//</u>		

Comments on any "No" response:	De Man	
Second Level Review. There	yl A Adam	Date: 4 27-06

20/2006 4:39:5	59 PM				ample Prepa		ysis			d:1120373922	
6403, Brown a		, Brov	/n &	S1 Thorium	pRc5016, SepRC 1-228,230,232 by A ARD TEST SET	5084(5003) Alpha Spec		:	Pipet Sep1 DT/Tm Ted		
alyDueDate:	03/31/2006			UISIANDA		rete. E 1 - £247	<u> </u>		Sep2 DT/Tm Ted	sh:	
itch: 6110472	FILTER	pCi/s	ampl		PM, Qt	iote: EJ , 6317	7		-	ch: HansenM	
Q Batch, Test: N	None				1 12 8 11 8 1						Commonte
/ork Order, Lot,	Total Amt	Total Acidified/Ur	31	itial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Sample Date	/Unit	<u> </u>			<u></u>	THTC9525					
1X81V-3-AA B270158-5-SAM	0.833sa	501.14sa	50).31g,in	0.0836g	04/20/06,pd 02/24/06,r					
/05/2006 D8:15			AmtRec: F	OLDER	#Containers: 1			Scr:	Alpha:	· 	Beta:
H3PLC-1-AA-B D200000-472-BL	K		1.	00sa,in	1.00sa	THTC9526 04/20/06.pd 02/24/06.t			· · · · · · · · · · · · · · · · · · ·		
			AmtRec:	#C	containers: 1			Scr:	Alpha:		Beta:
H3PLC-1-AC-C			1	.00sa,in	1.00sa	THSH0240 04/11/06,pd					
5D200000-472-L(1			AmtRec.	#(Containers: 1	02/24/06.r		Scr:	Alpha:		Beta:
Comments:											
Clients fo 536403, Ba	or Batch: cown and Caldwe	11		Bro	own & Caldwell		EJ , 63174				
	Constituent Li	st:		UCL:	RPD:	Th-230 Th-234	RDL:1 RDL:	pCi/s pCi/s		UCL: UCL:115	RPD: RPD:20
KB1V3AA-SAMP Th-228 Th-232	RDL:1	pCi/sam pCi/sam	LCL:	ACT:	RPD:	111-234					
Th-228 Th-232	RDL:1	pCi/sam pCi/sam			RPD: RPD: RPD:	Th-230 Th-234	RDL:1 RDL:	pCi/s	am LCL:	UCL: UCL:115	RPD: RPD:20
Th-228 Th-232 3PLC1AA-BLK (Th-228 Th-232	RDL:1 RDL:1 Constituent Lis RDL:1 RDL:1	pCi/sam pCi/sam t: pCi/sam	LCL:	UCL:	RPD: RPD:	Th-230			sam LCL:20		
Th-228 Th-232 3PLC1AA-BLK O Th-228 Th-232 3PLC1AC-LCS: Th-230	RDL:1 Constituent Lis RDL:1 RDL:1 RDL:1 Calc Info: evel (#s):: 2	pCi/sam pCi/sam pCi/sam pCi/sam	LCL: LCL: LCL:70	UCL: UCL: UCL:1	RPD: RPD: 30 RPD:20	Th-230 Th-234 Th-234	RDL: RDL:	pCi/s	sam LCL:20	UCL:115	RPD:20

Clouseau Nonconformance Memo



NCM #: 10-07906

NCM Initiated By: Pam Anderson Date Opened: 04/25/2006

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: Thiso by ALP

Lot #'s (Sample #'s): J6B270158 (5),

QC Batches: 6110472

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name Pam Anderson <u>Date</u>

Description

04/25/2006

Sample HX81V1AA had a very high yield on the first analysis. A recount was still

high. The sample was reanalyzed with an acceptable yield of 92%.

Corrective Action

<u>Name</u>

<u>Date</u>

Corrective Action

Pam Anderson

04/25/2006

The sample was reanalyzed with a good yield.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

Status

Notes

This section not yet completed by QA.

Approval History

Date Approved

Approved By

Position

Date Printed: 4/25/2006

4/24/2006 4:19:10 PM

ICOC Fraction Transfer/Status Report ByDate: 4/24/2005, 4/29/2006, Batch: '6110472', User: *ALL Order By DateTimeAccepting

Batch Wo	rk Ord CurStat	tus Ac	cepting		Comments
6110472 AC SC SC SC SC SC SC SC SC	CalcC	HansenM hansenm HansenM AndersonE ManisD ManisD DAWKINSO BlackCL	4/20/2006 4:20: IsBatched InPrep2 Sep1C Sep1C Sep2C InCnt1 CalcC	18 PM 4/20/2006 4:14:32 PM 4/20/2006 4:20:18 PM 4/21/2006 11:46:20 AM 4/21/2006 11:47:06 AM 4/21/2006 3:52:58 PM 4/21/2006 6:07:29 PM 4/24/2006 7:44:37 AM	ICOC_RADCALC v4.8.22 RICH-RC-5016 REVISION 5 RICH-RC-5087 REV 0 RICH-RC-5087 REV 0 RICH-RC-5003 REV 6 RICH-RD-0008 REVISION 4 RICH-RD-0008 REVISION 4
4C 4C 4C 4C 4C		AndersonE ManisD ManisD DAWKINSO BlackCL	4/21/2006 11:4/ 4/21/2006 11:4 4/21/2006 3:52 4/21/2006 6:07 4/24/2006 7:44	7:06 :58 PM :29 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

4/24/2006 4:	19:10 PM			Rpt DB	Transfe	r log (Batch	n Res		TR	VERN EN	STL
SDG or Batch Isotope	Rpt Db Io Method	_8	Tst C		Client Id Result P 0514	Matrix Cnt Uncert AIB	Tot ∪nceπ	ved Date mga 006 8:00:00	Sample Units 2/5/200	Date <u>Expected Yield</u> 6 8:15:00 AM	V	olumes
31025 TH-228	9HX81V: 9NS1	30 2		J6B2701585 4/22/2006 6:10:39		1.641E-01			PCI/SA	0.922	1.0E+0	3.363E-2
TH-230	9NS1 9NS1	2		4/22/2006 6:10:39 4/22/2006 6:10:39			2.314E-01 9.981E-02		PCI/SA PCI/SA	0.922 0.922	1.0E+0 1.0E+0	3.363E-2 3.363E-2
TH-232 31025	H3PLC1	_	;	J6D200000472	INTRA-LAB BL			00:00 8:00:00		6 8:15:00 AM		405.0
TH-228	9NS1 9NS1	0		4/22/2006 6:11:04 4/22/2006 6:11:04		0.0E+00 8.201E-03	4.855E-03 8.294E-03	1.074E-02 1.75E-02	PCI/SA PCI/SA	0.938 0.938	1 0E+0 1 0E+0	1.0E+0 1.0E+0
TH-230 TH-232	9NS1	0	_	4/22/2006 6:11:04	PM 0.0E+00	0.0E+00	4.474E-03		PCI/SA	0.938	1.0E+0	1.0E+0
31025 TH-230	H3PLC1 9NS1	CS	_	J6D200000472 4/22/2006 6:11:23	2 INTRA-LAB CH 3 PM 1.6741E+00	7.143E-02	2/27/2 1.384E-01	2.09E-02	2/5/200 PCI/SA	96 8:15:00 AM 1.8295E+00 0.917	1.0E+0	1.0E+0

STL Richland, Wa Calc Review v4.8.18

^{6110472, **}Samples Inserted | Updated | NotUpdated => 3 | 0 | 0,
 **Results Inserted | ReTestInserted | Updated | NotInserted => 7 | 0 | 0 | 0.
 **Diff RptDb | Otims => .

Batch Nbr: 6110472	Alpha Spec, Thiso by ALP	, Results	4/24/2006 7:38:01 AM
	Summary Report		

Status	s Meth	Matrix	Wrk Ord	Paramete	r Sa Act	Uncert	Q Units	Av ILcC	IDC	QC Yield	RYld
Thiso	by AL	Р	Ric	hland Stand	dard Alpiso	Wo Blk Sub	ot.		(RDLX	
Calc	\$1	AIR	HX81V3AA	TH-228	2.48E-01	(1.65E-01)	U4 PCI/SA	R 2.04E-01	5.76E-01	ุกั ^{บบ} ั92%	
Calc	S1	AIR	HX81V3AA	TH-230	8.29E-01	(2.31E-01)	PCI/SA	R 9.40E-02	3.43E-01	92%	
Calc	S1	AIR	HX81V3AA	TH-232	1.71 E-01	(9.98E-02)	PCI/SA	R	1.55E-01	92%	
Calc	S1	AIR	H3PLC1AA	TH-228	0.00E+00	(4.86E-03)	U4 PCI/SA	Ħ	1.07E-02	8 94%	
Calc	S1	AIR	H3PLC1AA	TH-230	1.75E-02	(8.29E-03)	PCI/SA	R 3.80E-03	1.75E-02	B 94%	
Calc	S1	AIR	H3PLC1AA	TH-232	0.00E+00	(4.47E-03)	U4 PCI/SA	R	9.90E-03	B 94%	
Calc	S1	AIR	H3PLC1AC	TH-228	5.94E-03	(5.96E-03)	U4 PCI/SA	R 8.42E-03	2.58E-02	S 92%	
Calc	S1	AIR	H3PLC1AC	TH-230	1.67E+00	(1.38E-01)	PCI/SA	R 6.33E-03	2.09E-02	S 92%	92%
Calc	S1	AIR	H3PLC1AC	TH-232	4.87E-03	(4.40E-03)	U4 PCI/SA	R 4.48E-03	1.72E-02	S 92%	

() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
*Std - Lc, MDC using StdDev for Set of Blanks

Page 1

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:12 RADCALC v4.8.18 STL Richland

	Batch Nbr: 6	110472				Α	lpha	Spe	c, T		o by ALF			ated F	Result	S		4/24	1/2006 7:38:0	01 AM
Sq	Status Method	Matrix	Protocol	Equati	on Set	Wrk	Ord	Units/M	atrix (Detailed B Sa/On Date	Hepon Analysis		/t Sep1/5	Sep2 Date	QC/Trace	r Vial Mult/EntY	id Total/Analy	Vol Final/Co	unt Vo
1 5364	Calc S1 403,P 0514	AIR	*STLE	-	WoBS I B270158-5			PCI/SA AIR	\	02	2/05/06 08:15	04/22/06	3 18:10			888.21	1 Alq	1.00 S 0.083626 S		
S	Cnt Date	Paramete	r Samp	de Cnt	Bkgmd C	Ont Ir	nstr	Geom	Trc/Av	Ent	t Efficiency1	Efficiency 2	Ent	YId Fct	Ent	Bik Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	04/22/06 14:00) TH-228	6 500.0	666666	4 1000.13		P116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)		1.0787E+00	
1	04/22/06 14:00	0 TH-230		666666	1 1000.13		.P116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
2	04/22/06 14:00	0 TH-232	3 500.0	666666	0 i 1000.13		.P116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/21/06 17:0	5 TH-234	7328 20	1	544 500	GI	PC28B	COP	Y	N	4.4600E-01 (6.690E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
•	Sq Calc Date	Paramete	r Avg	Sa A	ct	Q	Net C	nt Rt	Dpm	Wo E	3lk Dpm-B	ik Vo	i Used		Yield,EnFo	t Chem Ylo	JEFetU IDC/ILe	C BikLcC/N	ADC StdDvMd	dC/LcC
	04/24/06	TH-228		0.2481			7.99893 (5.2908		0.042		0.042707) (0.02831	4.1	1.0 0.02706	00 SA 4)	92%		0.57608 0.204102			
	04/24/06	TH-230		0.82889 (0.2313			2.8996 (7.8092		0.153 (0.04)		0.153883) (0.04205		1.0 0.02706	00 SA 4)	92%		0.342877 0.094036			
	04/24/06	TH-232		0.17149 (0.0998			5.99920 (3.4636		0.031 (0.01		0.031838) (0.01844	_	1.0 0.02706	00 SA 4)	92%		0.154917	7		
	04/24/06	TH-234		4411.99 (264.52			3.65312 (4.2804		819.0 (15.5				1.0 0.02706	00 SA 4)	92%					
Sq	Status Method	Matrix	Protoco	l Equat	ion Set	Wrk	Ord	Units/N	atrix	OC/B	B Sa/On Date	Analysis	ate/PptV	Vt Sep1/	Sep2 Date	QC/Trace	er Vial Mult/Ent	Yid Total/Analy	/Vol Final/Co	ount Vo
2 0,IN	Calc S1 ITRA-LAB BLANK	AIR	*STLE	•	WoBS 6D200000		CIAA	PCI/S/ AIR	A I	3 0:	2/05/06 08:15	04/22/0	6 18:11			889.99	1 Arq	1.00 S 1.00 S		
ş	q Cnt Date	Paramete	er Sam	ple Cnt	Bkgrnd (Cnt I	nstr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	2 Ent	YId Fct	Ent	Bik Value	ingr Fct	Canv Fct/VolAd	ij Decay	Abr
0	04/22/06 14:0	1 TH-228	0 500.0	333333	0 2500.03		LP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	94% 3%	N		1.0000E+00 (0.000E+00)	4.5045 E- 01 1.00	1.0787E+00)
1	04/22/06 14:0	1 TH-230	5 500.0		1 3 2500.00		LP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	94% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00)
2	04/22/06 14:0	1 TH-232	0		0 3 2500.00	Al	LP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	94% 3%	N		1.0000E+00 (0.000E+00)		1.0000E+00)
3	04/21/06 17:0	5 TH-234	7498 20		617 500		PC28C	COP	Y Y	N	4.4770E-01 (6.715E-03)		N	100%	N			4.5045E-01	1.0000E+00)
0.	- (1s Uncertainit							n Conn. 1	Inito 14		Page Jinimum Detector		ion	 			Reci		RADCALC v4	
Sr-	C - Instrument De 89 Counts are De	erived from the	Combinati	ion of Ea	Metriod .ch Sr-89/9	Decision 100 and Y	-90 Cour	nt, Ali Re	sult Dig	its Ma	ny Not be Significa	nts, Date/Tin	ne - mm/c	dd/yy hh:mm	n, 24hr Time	•		;	STL Richland	

!	Batch Nbr: 61	10472			F	∖lpha	. Spe	c, T	hls	o by ALF	, Ca	alcula	ated	Results	3		4/24	1/2006 7:38:	02 AM		
s	q Calc Date	Parameter	Avg	Sa Act	Q	Net (nt Rt	Dpm	Wo B	3lk Dpm-8l	k Yol	Used		Yield,EnFct	Chem Yld,	EFctU IDC/ILc0	BlkLcC/M	IDC StdDvMd	1C/LcC		
_	04/24/06	06 TH-228		0.00E00 (0.004855)	U4	0.0000		0.00E (0.009		0,00E00 (0.009993) (0.	1.00 (017321)		94%		0.010744					
	04/24/06	TH-230	R	0.017535 (0.008294)		9.59934E-03 (4.4897E-03)		0.038927 (0.018296)		0.038927) (0.018296) (0.	1.00 SA (0.017321)		94%		0. 017 497 0.003801					
	04/24/06	TH-232	R	0.00E00 (0.004474)	U4	U4 0.00000E+00 (0.0000E+00)				0.00E00 (0.009933) (0.	1.00 SA (0.017321)		94%		0.0099					
	04/24/06	TH-234	R	375.961246 (21.131794)		3.7366 (4.3298	6E+02 BE+00)	834.6 (15.8		834.6348 4) (15.81999	· (0.	\		1.00 SA		94%					
q	Status Method	Matrix	Protoc	of Equation Se	t Wr	k Ord	Units/N	latrix	QC/B	B Sa/On Date	AnalysisDa	te/PptWt	Sep1	/Sep2 Date	QC/Tracer	Vial Mult/EntY	id Total/Analy	Vol Final/Co	unt Vol		
	Calc \$1 TRA-LAB CHECK		'STLE	AlpisoWoB5		C1AC	PCI/S/ AIR		\$ 02	2/05/06 08:15	04/22/06	18:11			4.0615 690.22 A	1 lq /	1.00 S 1.00 S				
Sc	Cnt Date	Parameter	San	nple Cnt Bkgri	nd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	j Decay	Abn		
)	04/22/06 14:01	TH-228	3 500.	6 0333333 2500		ALP118	COP	N Y	N	3.2289E-01 (9.687E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0787E+00			
ı	04/22/06 14:01	TH-230	551 500.	ر 0333333 2500		ALP118	COP	N Y	N	3.2289E-01 (9.687E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00			
2	04/22/06 14:01	TH-232	2 500.	2 0333333 2500		ALP118	COP	N Y	N	3.2289E-01 (9.687E-03)		N	92% 3%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00			
3	04/21/06 17:05	5 TH-234	546 20	1 520 500	(3PC28D	COP	Y Y	N	4.2980E-01 (6.447E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00			
Ş	Sq Calc Date	Parameter	Avç	Sa Act	Q	Net (Cnt Rt	Dpm	Wo E	3lk Dpm-B	k Vol	Used		Yield,EnFct	Chem Yld,	EFetU IDG/ILc0	BikLcC/N	ADC StdDvMd	dC/LcC		
	04/24/06	TH-228	R	0.005943 (0.005959)	U4	3.5996		0.012 (0.01		0.012232) (0.012246	s) (o	1.00 (017321.		92%		0.025769 0.008415					
	04/24/06	TH-230	R	1.674089 (0.138356)		1,1003 (4.695		3.716 (0.23		3.716481) (0.235938	3) (0	1.00 (017321.		92%	92%	0.02090° 0.00633°					
	04/24/06	TH-232	R 0.004868 U4 (0.004402)		U4	3.19974E-03 (2.8843E-03)		0.010807 (0.009755)		0.010807) (0.009755	i) (o	1.00 (0.017321)		92%		0.017194 0.004477					
04/24/06		TH-234		R 285.078884 (16.150537)			0E+02 2E+00)	=						92%							

STL Richland

Page 2

RADCALC v4.8.18 RecCnt:3

^{() - (1}s Uncertaintities), Q - Qualifier, U Result is Less Than Lc = 1.645 ° TPU Page 2

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Thorium Yield Determination by Beta-emitting Th-234 tracer

Reference Tracer Data: Ref. Date: 24-Feb-06

								F	
	Beta	Gross	Count	Bkg	Bkg	Bkg	Grams	SrY-90	DPM/g of
Ref. ID	Detector	Counts	Time	Counts	Time	СРМ	Found	Eff	Tracer
CAL5735	28B	1170	20	544	500	1.0880			
CEASTAIN S	·海流域728年	188 1320	20 m	461	- គេចប្រឹ	25/0	\$25 0X0749	Control	PARKER OF THE
CAL5737	28D	1106	20	520	500	1.0400	0.0744	0.4298	1696.84
							Average DP	M/g of tracer =	177253

Sample Trace	r Data:	
	Tracer	DPM
VIAL ID	Mass	Tracer
A SHELL WEST OF SHE	(Definite	a dired
THTC9526	0.5021	889.99
THE RIVER	لرغيتين	69022
		0.00
		e um
		0.00
E William II.		0.00
		0.00
		000
		0.00
The state of the s	Eventual and the second	0.00
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interest and a second of		0.00
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Property of the Control of the Contr	Elementario el Millo	7.70
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		11/1/11
		0.00
region of the section		
		0.00

FORM NO. RC-103, REV. 2, 10/95

R. Technician	106	Counting Time Sample	M ISOTOP 500	SOP's Minutes Opera			~ <i>a</i> nai
R. Analyst		Background <u>See A</u>	llpha Analysis Report	Th BR	W: RICHROOM	⁰¹⁶ イナン	
		(4845 KeV) acer					
	from Th-234	Beta Count (7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)	•	
WorkOrder #	ID Activity	ROI Cts BKG	(6)	(8)	(9)	Det #	Comment
HX8N3AA	10		See Alpha	Analysis Report for ROI	Information	116	
H3PLCIAA	10	Ö	See Alpha	117			
H3PLC1AC	10	0	See Alpha	Analysis Report for ROI	Information	118	
	10		See Alpha	Analysis Report for ROI	Information		:
	10	0.0	See Alpha	Analysis Report for ROI	Information		
	10		See Alpha	Analysis Report for ROI	Information		
	10	0	See Alpha	Analysis Report for ROI	Information		
	10	0	See Alpha	Analysis Report for ROI	Information	-	
	10		See Alpha	Analysis Report for ROI	Information		

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

4/27/2006 5:06:32 PM

Lot No., Due Date:

J6B270158; 03/31/2006

Client, Site:

536403; AIR MONITORING Yerington Mine

QC Batch No., Method Test: 6115380; RTHISO Thiso by ALP

SDG, Matrix:

31025; FILTER

O COC It is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yey No N. O CC Batch 1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yey No N. 2 Are the QC appropriate for the analysis included in the batch? Yey No N. 3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yey No N. 4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N. 5 Use the LCS result, yield, and MDA within contract limits? Yes No N. 2 Is the LCS result, yield, and MDA within contract limits? Yes No N. 3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N. 4 Are the duplicate result, yields, and MDA within contract limits? Yes No N. 5 Are the sample yields and MDAs within contract limits? Yes No N. 6 Raw Data 1 Were results calculated in the correct units? Yes No N. 9 Were analysis volumes entered correctly? Yes No N. 10 Were shelds entered correctly? Yes No N. 10 Were sheld entered correctly? Yes No N. 11 Are all required forms filled out? Yes No N. 12 Are all required forms filled out? Yes No N. 13 Was the correct methodology used? Yes No N. 14 Was transcription checked? Yes No N. 15 Were all calculations checked at a minimum 'requency? Yes No N. 16 Are worksheet entries complete and correct? Yes No N. 16 Comments on any No response: See NCM. 16 Comments on any No response:	~-				
1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yeg. No. N. 2 Are the QC appropriate for the analysis included in the batch? 3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? 4 Pos. No. N. 4 Does the Worksheets include a Tracer Vial label for each sample? 4 Yeg. No. N. 5 OC & Samples 5 Is the Dank results, yield, and MDA within contract limits? 5 Is the LCS result, yield, and MDA within contract limits? 6 Is the MS/MSD results, yields, and MDA within contract limits? 7 Yes. No. N. 8 Are the duplicate result, yields, and MDA within contract limits? 8 Are the sample yields and MDAs within contract limits? 9 Yes. No. N. 9 Are the sample yields and MDAs within contract limits? 9 Yes. No. N. 9 C. Raw Data 1 Were results calculated in the correct units? 9 Yeg. No. N. 9 Were analysis volumes entered correctly? 9 Yeg. No. N. 9 Were analysis volumes entered correctly? 9 Yeg. No. N. 9 Were spectra reviewed/moet contractual requirements? 9 Yeg. No. N. 9 Were raw counts reviewed for anomalies? 9 Yeg. No. N. 9 Other 1 Are all nonconformances included and noted? 9 Yeg. No. N. 9 Was transcription checked? 9 Yeg. No. N. 9 Were all calculations checked at a minimum frequency? 9 Were all calculations checked at a minimum frequency? 9 Yeg. No. N. 9 Were wished entries complete and correct? 9 Yeg. No. N.	1.0 1.1	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yeş	No	N/A
No No No No No No No No No No No No No N	2.0 2.1	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
4 Does the Worksheets include a Tracer Vial label for each sample? O CC & Samples 1 Is the blank results, yield, and MDA within contract limits? 2 Is the LCS result, yield, and MDA within contract limits? 3 Are the MS/MSD results, yields, and MDA within contract limits? 4 No No No No No No No No No No No No No	2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
O QC & Samples 1 Is the blank results, yield, and MDA within contract limits? 2 Is the LCS result, yield, and MDA within contract limits? 3 Are the MS/MSD results, yields, and MDA within contract limits? 4 Are the duplicate result, yields, and MDAs within contract limits? 5 Are the sample yields and MDAs within contract limits? 6 Are the sample yields and MDAs within contract limits? 7 Yes No No No No No No No No No No No No No	2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
1 Is the blank results, yield, and MDA within contract limits? 2 Is the LCS result, yield, and MDA within contract limits? 3 Are the MS/MSD results, yields, and MDA within contract limits? 4 Are the duplicate result, yields, and MDA within contract limits? 5 Are the sample yields and MDAs within contract limits? 6 Are the sample yields and MDAs within contract limits? 7 No No No No No No No No No No No No No	2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	Nο	N/A
3 Are the MS/MSD results, yields, and MDA within contract limits? 4 Are the duplicate result, yields, and MDAs within contract limits? 5 Are the sample yields and MDAs within contract limits? 7 No No No No No No No No No No No No No	3.0 3.1	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	Ng	N/A
4 Are the duplicate result, yields, and MDAs within contract limits? 5 Are the sample yields and MDAs within contract limits? 6 No No No No No No No No No No No No No	3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
Are the sample yields and MDAs within contract limits? Raw Data Were results calculated in the correct units? Were analysis volumes entered correctly? Were analysis volumes entered correctly? Were spectra reviewed/meet contractual requirements? Were spectra reviewed/meet contractual requirements? Were raw counts reviewed for anomalies? Were all nonconformances included and noted? Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency? Are worksheet entries complete and correct? Yes No No No No No No No No No No No No No	3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
O Raw Data 1 Were results calculated in the correct units? 2 Were analysis volumes entered correctly? 3 Were Yields entered correctly? 4 Were spectra reviewed/meet contractual requirements? 5 Were raw counts reviewed for anomalies? 7 Very No No No No No No No No No No No No No	3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
1 Were results calculated in the correct units? 2 Were analysis volumes entered correctly? 3 Were Yields entered correctly? 4 Were spectra reviewed/meet contractual requirements? 5 Were raw counts reviewed for anomalies? 7 Yes No No No No No No No No No No No No No	3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
No Notes and the spectra reviewed/meet contractual requirements? Were spectra reviewed/meet contractual requirements? Were raw counts reviewed for anomalies? Outher Are all nonconformances included and noted? Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency? Are worksheet entries complete and correct?	4.0 4.1	Raw Data Were results calculated in the correct units?	Yes	No	N/A
Were spectra reviewed/meet contractual requirements? Were raw counts reviewed for anomalies? Yes No No No No No No No No No No No No No	4.2	Were analysis volumes entered correctly?	Yeş	No	N/A
5 Were raw counts reviewed for anomalies? O Other 1 Are all nonconformances included and noted? 2 Are all required forms filled out? 3 Was the correct methodology used? 4 Was transcription checked? 5 Were all calculations checked at a minimum frequency? 6 Are worksheet entries complete and correct? Yes No No No No No No No No No No No No No	4.3	Were Yields entered correctly?	Yes	No	N/A
O Other 1 Are all nonconformances included and noted? 2 Are all required forms filled out? 3 Was the correct methodology used? 4 Was transcription checked? 5 Were all calculations checked at a minimum frequency? 6 Are worksheet entries complete and correct? Yes No No No No No No No No No No No No No	4.4	Were spectra reviewed/meet contractual requirements?	Yeş	No	N/A
Are all nonconformances included and noted? Are all required forms filled out? Was the correct methodology used? Was transcription checked? Were all calculations checked at a minimum frequency? Are worksheet entries complete and correct?	4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
3 Was the correct methodology used? 4 Was transcription checked? 5 Were all calculations checked at a minimum frequency? 6 Are worksheet entries complete and correct? Yes No No No No No No No No No No No No No			Yes	No	N/A
4 Was transcription checked? 5 Were all calculations checked at a minimum frequency? 6 Are worksheet entries complete and correct? Yes No No No No No No No No No No No No No	5,2	Are all required forms filled out?	Yes	No	N/A
5 Were all calculations checked at a minimum frequency? 6 Are worksheet entries complete and correct? Yes No N.	5.3	Was the correct methodology used?	Yes	No	N/A
6 Are worksheet entries complete and correct? Yes No N	5.4	Was transcription checked?	Yes	Νo	N/A
V.	5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
O Comments on any No response: See NCM. 10-07935	5.6	Are worksheet entries complete and correct?	Yes	No	N/A
	6.0	Comments on any No response: See NCM. 10-07935	₩.		

First Level Review _

Pon anderary

Date 4-27-06



Data Review Checklist RADIOCHEMISTRY Second Level Review

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	15380
OC Batch Number: Q/	12010
OC Daten runnoger	

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Second Level Review: Therry Q Odam Date: 4/27-0

25/2006 1:01:2 36403, Brown ar		, Brow	n & 9N	Thiso Prpi	mple Prepa Rc5016, SepR0 28,230,232 by	aration/Anal 05084(5003) Alpha Spec	ysis		Pipet		
aldwell nalyDueDate: (01	STANDAR	D TEST SET	uoto: E.L. 6317	·4		Sep1 DT/Tm Tec Sep2 DT/Tm Tec		
atch: 6115380 EQ Batch, Test: N NS1, 6115380 9N	FILTER lone All Tests: 60 S1,	pCi/s)60317 7YSR,	ampi 6060336 9N:	S1, 6060337	BAS7, 6060339	BDS8, 6060342	3XTE, 6060344	BXTF, 6110472	Prep Tec	ch: HansenM	Comments
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Uni		Aliquot /Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	, Comments:
HX81T-2-AA 6B270158-4-SAMF	0.833sa	508.67sa	50. 22 g	in 0.	0822g	THTF0428 11/14/05,pd 05/23/05,r	<i>90</i> 0				
- 		*	AmtRec: FOLDI	ER #	Containers: 1			Sor.	Alpha:		Beta:
H3153-1-AA-B SD250000-380-BL	К	<u>.</u>	1.00sa	ı,i n 1.	00sa	THTF0429 11/14/05.pd 05/23/05.r				·	
2/05/2006 07:45			AmtRec:	#Cont	ainers: 1			Sor:	Alpha:		Beta:
H3153-1-AC-C 5D250000-380-LC	es		1.00sa	a,in 1	.00sa	THSO0032 11/01/05,pd 05/23/05.r					
02/05/2006 07:45			AmtRec:	#Con	tainers: 1			Sor:	Alpha:		Beta:
Comments:											
il Clients fo 536403, Br	r Batch: own and Caldwel			Browi	& Caldwell	,	EJ , 63174	4			
Th-228	Constituent Lis RDL:1 RDL:1	pCi/sam	LCL:	ncr:	RPD: RPD:	Th-230 Th-234	RDL:1	pCi/ pCi/		UCL: UCL:115	RPD: RPD:20
	onstituent List RDL:1 RDL:1	pCi/sam	LCL:	UCL:	RPD: RPD:	Th-230 Th-234	RDL:1 RDL:	pCi.	/sam LCL: /sam LCL:20	UCL: UCL:115	RPD: RPD:20
31531AC-LCS: Th-230	RDL:1	pCi/sam	LCL:70	UCL:130	RPD:20	Th-234	RDL:	pCi	/sam LCL:20	UCL:115	RPD:20
X81T2AA-SAMP Uncert Le 31531AA-BLK (evel (#s).: 2 Calc Info:	Decay to		Blk Sub			DDRs: B	- Insufficient Vol	me for Analysis		WO Cnt: 3
	Advision Incition A	mt fi-Final	Amt. di - Dilu	ted Amt, s1 -	Sep1, s2 - Sep2	Page 1	151	- maundient von	and 101 1 many and		Prep_SamplePrep v4

Clouseau Nonconformance Memo



NCM #: 10-07935

NCM Initiated By: Pam Anderson Date Opened: 04/27/2006

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: Thiso by ALP

Lot #'s (Sample #'s): J6B270158 (4), J6D250000

(380),

QC Batches: 6115380

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name Pam Anderson <u>Date</u>

Description

04/27/2006 1 On batch 6110472 the wrong sample got reanalyzed. Sample HX81T1AA had a

143% recovery but the sample after it was the one reanalyzed by mistake. Sample

HX81T was reanalyzed in batch 6115380.

2 The yields for this batch are slightly over 115%. The LCS gives 108% recovery.

Data will be accepted.

Corrective Action

<u>Name</u>

<u>Date</u>

Corrective Action

Pam Anderson

04/27/2006

The sample was reanalyzed.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

Status

This section not yet completed by QA.

Notes

Approval History

Date Approved

Approved By

Position

Date Printed: 4/27/2006 Page 1 of 1

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4/27/2006 5:	05:36 PM			Rpt DB	Transfe	r log (Batch	Res			VERN	STL
SDG or Batch Isotope	Rpt Db Id Method	E	Tst C	LotSample Co Analysis Date J6B2701584	Client Id Result P 0513	Matrix Cnt Uncert AIR	Tot ∪nceπ	red Date <u>Maa</u> 006 8:00:00	Sample Units 2/5/200	Date <u>Expected Yiel</u> 6 7:45:00 AM	d Vo	olumes
31025 TH-228	9HX81T: 9NS1	20 1		4/26/2006 7:35:38		1.937E-01	2.02E-01	1.583E-01	PCI/SA	1.238	1.0E+0	3.224E-2
TH-230	9NS1	1		4/26/2006 7:35:38		0.2	0.0102 0	1.452E-01 1.452E-01	PCI/SA PCI/SA	1.238 1.238	1.0E+0 1.0E+0	3.224E-2 3.224E-2
TH-232	9NS1	1		4/26/2006 7:35:38		1.608E-01 ANK AIR	1,0000	1.452E-01 006 8:00:00		16 7:45:00 AM	1.00.40	J.E.G.T.E. =
31025 TH-228	H315317 9NS1	9 9	В	J6D250000380 4/26/2006 7:35:40		3.733E-03	3.746E-03	1.012E-02	PCI/SA	1.221	1.0E:+0	1.0E+0
TH-230	9NS1	0	В	4/26/2006 7:35:40		4.893E-03	4.92E-03	1,641E-02	•	1.221 1.221	1.0E+0 1.0E+0	1.0E+0 1.0E+0
TH-232	9NS1	0		4/26/2006 7:35:40		0.0E+00 IECK AIR	4.196E-03	9.284E-03 006 8:00:00		1.221 06 7:45:00 AM	1.00.40	1,0270
31025 TH-230	H31531 (9NS1	CS		J6D250000380 4/26/2006 7:35:45		7.454E-02		7.56 E-03	PCI/SA	1.8387E+00 1.174	1.0E:+0	1.0E+0

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STL Richland, Wa Calc Review v4.8.18

Page 1

^{6115380, **}Samples Inserted | Updated | NotUpdated => 3 | 0 | 0,

**Results Inserted | ReTestInserted | Updated | NotInserted => 7 | 0 | 0 | 0,

**Diff RptDb | Qtims => .

4/27/2006 5:05:36 PM

ICOC Fraction Transfer/Status Report ByDate: 4/27/2005, 5/2/2006, Batch: '6115380', User: *ALL Order By DateTimeAccepting

Batch Work	Ord CurStat	us A	ccepting		Comments
3115380				· · · · · · · · · · · · · · · · · · ·	· ··
IC	CalcC	HansenM	4/25/2006 1:06	:11 PM	
SC .		hansenm	IsBatched	4/25/2006 12:57:54 PM	ICOC_RADCALC v4.8.22
SC		HansenM	InPrep2	4/25/2006 1:06:11 PM	RICH-RC-5016 REVISION 5
SC .		HansenM	Prep2C	4/25/2006 3:47:15 PM	RICH-RC-5016 REVISION 5
3C		ManisD	Sep2C	4/26/2006 2:38:54 PM	RICH-RC-5003 REV 6
SC .		DAWKINSO	CalcC	4/27/2006 2:47:42 PM	RICH-RD-0008 REVISION 4
C		HansenM	4/25/2006 3:47:	15 PM	
IC		ManisD	4/26/2006 2:38:	54 PM	
4 <i>C</i>		DAWKINSO	4/27/2006 2:47:	42 PM	

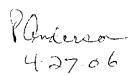
AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

327

Batch	Nbr: 6	115380		Alpha Sp	oec, Th	Iso by AL	P,R	esults	•	4/27/2	2006 2:44	46 PM
					Sum	mary Rep	ort					
Status	s Meth	Matrix	Wrk Ord	Parameter	Sa Act	Uncert C) Units	Av ILcC	IDÇ	QC	Yield	RYId
Thiso	by AL	Р	Ric	hland Stand	ard Alpisc	Wo Blk Subt						
Calc	S1	AIR	HX81T2AA	TH-228	6.42E-01	(2.02E-01)	PCI/SA	R	1.58E-01		124%)
Calc	S1	AIR	HX81T2AA	TH-230	1.93E+00	(3.65E-01)	PCI/SA	R	1.45E-01		124% /	i
Calc	S1	AIR	HX81T2AA	TH-232	4.82E-01	(1.66E-01)	PCI/SA	R	1.45E-01		124%/	
Calc	\$1	AIR	H31531AA	TH-228	3.73E-03	(3.75E-03) l	J4 PCI/SA	R	1.01E-02	В	122%	
Calc	S1	AIR	H31531AA	TH-230	6.17E-03	(4.92E-03) [[]	J4 PCI/SA	R 3.56E-03	1.64E-02	В	122%	
Calc	S1	AIR	H31531AA	TH-232	0.00E+00	(4.20E-03) L	J4 PCI/SA	R	9.28E-03	В	122%	
Calc	S1	AIR	H31531AC	TH-230	1.99E+00	(1.81E-01)	PCI/SA	R	7.56E-03	s	117%	108%



() - (1s Uncertainities)
IDC - Instrument Detection Level in Conc Units
MLcC- Method Decision Level in Conc Units
MDC - Minimum Detectable Concentration
'Std - Lc, MDC using StdDev for Set of Blanks

Page 1

Q - Qualifier, U is Less Than Lc = 1.645*TPU
All Results Displayed to Three Digits Reguardless of Significants
Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:10 RADCALC v4.8.18 STL Richland

	Batch Nbr: 61	15380				Albitio	Spe	;C, I		so by ALI Detailed	-		ated i	Result	S		4/2	7/2006 2:44:	46 P
òq :	Status Method	Matrix	Protocol	Equation Se	t	Wrk Ord	Units/N	Matrix	a de la companya de l	B Sa/On Date	*		/t Sep1/	Sep2 Date	QC/Trace	r Vial Mult/EntY	id Total/Analy	Vol Final/Co	unt Vo
	Calc S1 . 03,P 0513	AIR	STLE /	AlpisoWoB J6B2701			PCI/S/	۹	0:	2/05/06 07:45	04/26/06	3 19:35	tan Mali Mali ang palipi sa Pilipipi Albin maliPinge rny		THTFO	1 128 Alq	1.00 S 0.08224 S		, with writer depth of some
Sq	Cnt Date	Parameter	Sample	eCnt Bkgr	nd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAd	Decay	Abr
)	04/26/06 1 5:25	TH-228	11 500.15	0 100	0.05	ALP116	ÇOP	N Y	N	2.0433E-01 (6.130E-03)	THE STROY A POWERT A A PROSECULAR MAN	N	124% 8%	N	and a distributed in an agree, any suppression, agreement in a constraint of	1.0000E+00 (0.000E+00)	4.5045E-01 12.159464	1.0831E+00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	04/26/06 15:25	TH-229	515 500.15	3 100	0.05	ALP116	COP	Y Y	Ν	2.0433E-01 (6.130E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
	04/26/06 15:25	TH-230	36 500.15	0 100	0.05	ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	124% 8%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
3	04/26/06 15:25	TH-232	9 500.15	0 100	0.05	ALP116	COP	N Y	N	2.0433E-01 (6.130E-03)		N	124% 8%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
S	Calc Date	Parameter	Avg	Sa Act	Q	Net (Ont Rt	Dpm	Wo I	Blk Dpm-B	lk Vo	l Used		Yield,EnFc	t Chem Yio	I,EFctU IDC/ILc0		MDC StdDvMd	dC/Lc(
	04/27/06	TH-228		.6423 86).202007)		2.1993 (6.631)		0.108 (0.03		0.108285) (0.03349	• •	1.0	0 Sa 1)	124%		0.158261			
	04/27/06	TH-229		7.521039 2.147421)		1.0266 (4.540)		5.024 (0.26		5.024627) (0.268522	••	1.0 0.0 <mark>2706</mark> 4	0 Sa 1)	124%					
	04/27/06	TH-230		.929422 1.36484)		7.1978 (1.1996		0,352 (0.063		0.352262) (0.063528		1.0 0.02706	0 Sa 1)	124%		0.145243	ı		
	04/27/06	TH-232		.482355).166458)		1.7994 (5.9982		0.088		0.088066) (0.029976		1.0 0.027064	0 Sa I)	124%		0.145243	ļ.		
q s	Status Method	Matrix I	Protocol	Equation Se	t '	Wrk Ord	Units/N	latrix (QC/B	B Sa/On Date	AnatysisDa	ate/PptW	t Sep1/S	Sep2 Date	QC/Trace	r Vial Mult/EntY	id Total/Analy	Vol Final/Co	unt V
	Calc S1 / RA-LAB BLANK	AIR	STLE A	AlpisoWoB: J6D250			PCI/SA AIR	\ E	02	2/05/06 07:45	04/26/06	19:35			THTF04	1 129 Alq	1.00 S 1.00 S		
Sq	Cnt Date	Parameter	Sample	Cnt Bkgr	nd Cnt	Instr	Geom	Trc/Av	En	t Efficiency1	Efficiency 2	Ent	Yld Fct	Ent	Blk Value	ingr Fct	Conv Fct/VolAd	Decay	Abı
	04/26/06 15:25	TH-228	1 500.066	0 <i>~</i> 66666 2500		ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	122% 7%	N	North 1994 have monthly belt or	1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0831E+00	
	04/26/06 15:25	TH-229	650 500.066	1 36666 2500	0.05	ALP117	COP	Y Y	N	2.6295E-01 (7.889E-03)		N	100%	N		1.0000E+00 (0.000E+00)		1,0000E+00	
1	04/26/06 15:25	TH-230	2 500.066	1 36666 2500	0.05	ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	122% 7%	N		1.0000E+00 (0.000E+00)		1.0000E+00	
•	04/26/06 15:25	TH-232	0 500.066	0 86666 2500	0.05	ALP117	COP	N Y	N	2.6295E-01 (7.889E-03)		N	122% 7%	N		1.0000E+00 (0.000E+00)	4.5045E-01	1.0000E+00	
	- {1s Uncertainitie	s), Q - Qualifie ction Level in C	r, U Result	is Less Thai	1 Lc = 1	.645 * TPU				Page	1				er yez <u>yezwe</u> ndeyeniy da o d e tribanyenin yezyete e	RecC	nt·2 F	ADCALC v4.8	8.18

В	atch Nbr: 61	15380				Alpha	a Spe	ec, Th	าไร	o by ALP	, Ca	alcul	ated	Results	S		4/27	/2006 2:44	4:47 PN
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm \	Vo BI	k Dpm-Bik	Val	Used		Yield,EnFct	Chem Yid,	EFctU IDC/ILc0	BlkLcC/M	DC StdDvN	/ldC/LcC
	04/27/06	TH-228	R	0.003733 (0.003746)	U4	1.9997 (1.999		0.0076		0.00765 1 (0.007667)	(0	1.04 017321.	0 Sa)	122%		0.010116			
	04/27/06	TH-229	R	2.225998 (0.161128)		1.2994 (5.098		4.9417 (0.244	_	4.94172 (0.244078)	(0	1.00 017321.	0 Sa)	122%					
	04/27/06	TH-230	R	0.006166 (0.00492)	U4	3.5994 (2.856		0.0136		0.013689 (0.010899)	(0	1.0 01732 1 .	0 Sa)	122%		0.016408 0.003564			
	04/27/06	TH-232	R	0.00E00 (0.004196)	U4	0.0000		0.00E0 (0.009	-	0.00E00 (0.009314)	(0	1.00 017321.	0 Sa)	122%		0.009284			
q Si	tatus Method	Matrix	ocotor	l Equation Set	W	rk Ord	Units/i	Matrix C	C/BB	Sa/On Date	AnalysisDa	ate/PptW	t Sep1	/Sep2 Date	QC/Tracer	Vial Mult/EntY	ld Total/Analy	Vol Final/C	Count Vol
	alc S1 / RA-LAB CHECK	AIR	STLE	AlpisoWoBS ,J6D25000		31AC	PCI/S.	A S	02/	05/06 07:45	04/26/06	19:35		The street state of the state o	THSO00 THSO00	•	1.00 Sa 1.00 Sa	-	
Sq	Cnt Date	Parameter	Sam	ple Cnt Bkgrnd	Cnt	Instr	Geom	Trc/Av	Елt	Efficiency1 I	Efficiency 2	Ent	Yld Fct	Ent I	3lk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	14/26/06 15:25	TH-229	771 500.0	/ 12 0666666 2500	<i>'</i> .	ALP118	COP	Y Y		3.2289E-01 (9.687E-03)		N	100%	N		1.0000E+00 (0.000E+00)	4.5045E-01 1.00	1.0000E+00	0
0	4/26/06 15:25	TH-230	714 500.0	0 0666666 2500	•	ALP118	COP	N Y		3.2289E-01 (9.687E-03)		N	117% 7%	N		1.0000E+00 (0.000E+00)	= :	1.0000E+00	0
Sq	Calc Date	Parameter	Avg	Sa Act	Q	Net	Cnt Rt	Dpm \	No BI	k Dpm-81k	Vol	Used		Yield,EnFct	Chem Yid,	EFetU IDC/ILeC	BikLcC/M	DC StdDvN	vidC/LcC
	04/27/06	TH-229	R	2.144174 (0.151706)		1.5369 (5.554		4.7600 (0.223	_	4.760072 (0.223569)	(0.	1.00 017321.) Sa	117%			· · · · · · · · · · · · · · · · · · ·		
	04/27/06	TH-230	R	1.991857 (0.181428)		1.4278 (5.343		4.4219 (0.327		4.421926 (0.327833)	(0	1.0 1 017321.	0 Sa	117%	108%	0.00756			

RecCnt:3

RADCALC v4.8.18

STL Richland

^{() - (1}s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 2

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

C.R. Technician C> Date Counted 4/20/3	TL		Counting 7 Sample	Time		SOPs Minutes Opera	: oting: <u>RICHRDO</u>	<u> 28</u>	2345
C.R. Analyst J.O. Date Analyzed 4/2-7/	16		Backgrour	nd <u>See Al</u>	l <u>pha Analysis Report</u>	BKC Review	w: RICHRDOO	016	380
		•	4845 KeV) Icer	·		TOTAL COUNTS			
ManleOndon #		from Th-234	Beta Count (7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
HX8ITAAA		10		0	See Alpha .	Analysis Report for ROI	Information	116	
H3153 IAA		10		0	See Alpha	Analysis Report for ROI	Information	117	
HX81TAAA H31531AA H31531AC		10		0	See Alpha	Analysis Report for ROI	Information	116	
		10		0	See Alpha	Analysis Report for ROI	Information		
		10		0	See Alpha i	Analysis Report for ROI	Information		
		10		0	See Alpha /	Analysis Report for ROI	Information		
		10		0	See Alpha a	Analysis Report for ROI	Information		
		10		0	See Alpha /	Analysis Report for ROI	Information		
		10		0	See Alpha	Analysis Report for ROI	Information		

Form No: RC-012, 10/02, Rev 9

Comments:

Approved by:

Date: 4/27/06

THORIUM STANDARDS AND TRACEABILITY

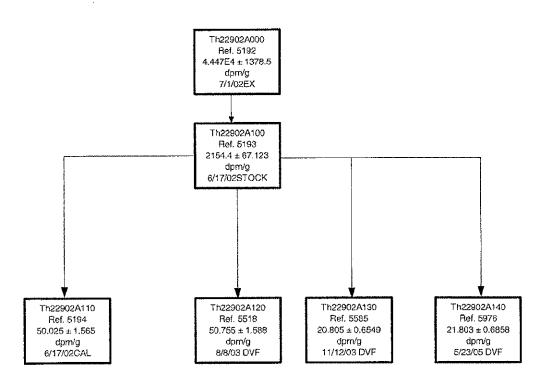
-,	2:05:44 PM 05 to 5/27/06						Fractions (Vials) 429, Order by SMIdentifier, Constituent Code, SMFraction Identifier
Vial Identifier	Constituent	Prep Activity/	Concentration		Std Wt L	lsed	Prep,Decayed To Date Prep by Std Decayed Activity/Concentration
	Parent Star	ndard: TH229	02A140	Ref:	5/23/2005	5	2.1803E+01 ± 6.858E-01 DPM/G
THTF0428	TH-229	4.0575E+00	± 1.277E-01	DPM	0.1861	g	11/14/2005 11/14/2005 Armstron 2.1803E+01 ± 6.858E-01 DPM.
THTF0429 T	TH-229	4.0488E+00	± 1.274E-01	DPM	0.1857	g	11/14/2005 11/14/2005 Armstron 2.1803E+01 ± 6.858E-01 DPM

STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

Page 1

Record Count: 2

Th22902A000



ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	5/23/2005
3) Source Identification Number / Ref. Number	TH22902A100	5193
4) Source Activity (dpm ± dpm/g)	2.1544E+03 ±	6.712E+01
5) Percent error of Source Activity	3.116 %	
6) Weight of Source Material used (g)	1.3208	
7) (% Error) of Weight of Source Material used	0.3634 %	
8) Diluent	2M HNO3-P0500135	
9) Total Weight of the Dilution (g)	130.51	
10) (% Error) of Total Weight of the Dilution	0.2299 %	
11) Specific Activity of Diluted Solution dpm/g	2.1803E+01 ±	6.858E-01
12) Total Uncertainty	3.146 %	
13) Dilution Identification Number / Ref. Number	TH22902A140	5976
14) Calibration Reference Date	5/23/2005	
15) Isotope Inventory File update by/date	W.G	5/23/2005
16) Reviewed by/date	sew	5/25/2005
17) Location QCLAB/STWT1162	18) Exhausted	Vacan Address Art Art Art Art Art Art Art Art Art Art
CALCULATIONS	***************	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	11/12/2003
3) Source Identification Number / Ref. Number	TH22902A100	5193
4) Source Activity (dpm ± dpm/g)	2.1544E+03 ±	6.712E+01
5) Percent error of Source Activity	3.116 %	
6) Weight of Source Material used (g)	1.2586	
7) (% Error) of Weight of Source Material used	0.3814 %	
8) Diluent	2M HNO3-P0300629	
9) Total Weight of the Dilution (g)	130.33	
10) (% Error) of Total Weight of the Dilution	0.2302 %	
11) Specific Activity of Diluted Solution dpm/g	±	6.549E-01
12) Total Uncertainty	3.148 %	
13) Dilution Identification Number / Ref. Number	TH22902A130	5585
14) Calibration Reference Date	11/12/2003	
15) Isotope Inventory File update by/date	W.G	
16) Reviewed by/date	SEW	11/13/2003
17) Location QCLAB/STWT0874	18) Exhausted	
**************************************	*************	•
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	1 / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error o	of Dilution Wt.^2)

Form: CC-006

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	8/8/2003
3) Source Identification Number / Ref. Number	TH22902A100	5193
4) Source Activity (dpm ± dpm/g)	2.1544E+03 ±	6.712E+01
5) Percent error of Source Activity	3.116 %	
6) Weight of Source Material used (g)	3.1194	
7) (% Error) of Weight of Source Material used	0.1539%	
8) Diluent	2M HNO3-P0300349	
9) Total Weight of the Dilution (g)	132.41	
10) (% Error) of Total Weight of the Dilution	0.2266 %	
11) Specific Activity of Diluted Solution dpm/g	5.0755E+01 ±	1.588E+00
12) Total Uncertainty	3.128 %	
13) Dilution Identification Number / Ref. Number	TH22902A120	5518
14) Calibration Reference Date	8/8/2003	
15) Isotope Inventory File update by/date	W.G	8/8/2003
16) Reviewed by/date	SEW	8/18/2003
17) Location QCLAB/STWT0825	18) Exhausted	to
**************************************	************	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used		
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev 3</u>

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	6/17/2002		
3) Source Identification Number / Ref. Number	TH22902A100	5193		
4) Source Activity (dpm ± dpm/g)	2.1544E+03 ±	6.712E+01		
5) Percent error of Source Activity	3.116 %			
6) Weight of Source Material used (g)	3.0295			
7) (% Error) of Weight of Source Material used	0.1584 %			
8) Diluent	2M HNO3-P0200009			
9) Total Weight of the Dilution (g)	130.47			
10) (% Error) of Total Weight of the Dilution	0.2299 %			
11) Specific Activity of Diluted Solution dpm/g	5.0025E+01 ±	1.565E+00		
12) Total Uncertainty	3.128 %			
13) Dilution Identification Number / Ref. Number	TH22902A110	5194		
14) Calibration Reference Date	6/17/2002			
15) Isotope Inventory File update by/date	W.G	6/17/2002		
16) Reviewed by/date	SEW	7/17/2002		
17) Location QCLAB/STWT0606	18) Exhausted			
*********************	************			
CALCULATIONS				
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)			
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)				
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution			
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error of the	Dilution Wt.^2)		

Form:

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	6/17/2002
3) Source Identification Number / Ref. Number	TH22902A000	5192
4) Source Activity (dpm ± dpm/g)	4.4467E+04 ±	1.378E+02
5) Percent error of Source Activity	3.1 %	
6) Weight of Source Material used (g)	4.9234	
7) (% Error) of Weight of Source Material used	0.0975 %	
8) Diluent	2M HNO3-P0200009	
9) Total Weight of the Dilution (g)	101.62	
10) (% Error) of Total Weight of the Dilution	0.2952 %	
11) Specific Activity of Diluted Solution dpm/g	2.1544E+03 ±	6.712E+01
12) Total Uncertainty	3.116 %	
13) Dilution Identification Number / Ref. Number	TH22902A100	5193
14) Calibration Reference Date	6/17/2002	
15) Isotope Inventory File update by/date	W.G	6/17/2002
16) Reviewed by/date	SEW	7/17/2002
17) Location QCLAB/STWT0605	18) Exhausted	
		> ₩
CALCULATIONS		
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 5	% error of Wt. Used^2 + % error	of Dilution Wt.^2)

Form: <u>CC-006, 7/15/99, Rev</u> 3

SEVERN

ISOTOPE RECORD FORM

		0) 5)-1	E100			
1) Isotope	<u>TH229</u>	2) Reference Number	5192			
3) Half Life	7340 ±160 yrs	4) Storage Location	Std Lab			
5) Source ld	lentification Number_	Th2290	02A000			
*********	**************************************	ALIBRATION DATA	***********			
6) Activity as	Received Units	20.03	nCi/g			
7) Overall Un	certainty Percent	3.1	1%			
8) Reference	Date / Time	JULY-01-02 12:00) PST (12:00 PM)			
9) Activity d _i	pm/g	44466.6 ± 13	378.46 dpm/g			
10) Volume or	r Mass (ml/g)	4.956	306 g			
11) Calibrated	1 by	IPL				
12) Certificate	Solution Number	94:	943-3			
*********	**************************************	**************************************	*********			
10) Data Bass	aivad		6/13/2002			
13) Date Rece						
14) Surveyed	py		W.G			
15) Survey Re	eading (Beta/Gamma)	cpm	<100 cpm			
16) Survey Re	eading (Alpha) cpm		<100 cpm			
************	**************************************	************	*****			
17) Activity Co	17) Activity Conversion 20.03 nCi/g *2.22E+03 dpm/nCi=44466.6± 1378.46 (3.1%)dpm/g					
18) Remarks	Use	d all to make first dilution 6/1	17/02 WG			
19) Isotope F	ile Updated by	W.G &	3/14/02			
20) QC Appro	oved	SEW :	7/17/02			



24937 Avenue Tibbitts Valencia, California 91355

Tel 661 • 309 • 1010 Fax 661-257-8303



An Eckert & Ziegler Company

CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Radionuclide:

Th-229

Half-life:

7340 ± 160 years

Catalog No.:

7229

Source No.:

943-3

Customer:

SEVERN TRENT LABORATORIES, INC. P.O. No.: 1424016-000 OP

Reference Date:

(Th-229 only)

Contained Radioactivity: 99.26

1-Jul-02

nCi

12:00 PST

3673

Bq

Physical Description:

A. Mass of solution:

4.95606 g in 5 mL flame-sealed ampoule

B. Chemical form:

None

C. Carrier content: D. Density:

1.0016 a/mL @ 20°C.

Th(NO₃)₄ in 0.1M HNO₃

Radioimpurities:

None detected (daughters in equilibrium)

Radionuclide Concentration:

20.03

nCi/g,

741.1

Bq/g

Method of Calibration:

This source was prepared from a weighed aliquot of solution whose activity in µCi/g was determined using gamma ray spectrometry.

Peak energy used for integration:

193.5 keV

Branching ratio used:

0.0441 gammas per decay

Uncertainty of Measurement:

A. Type A (random) uncertainty: B. Type B (systematic) uncertainty: ± 0.9 % 3.0 %

C. Uncertainty in aliquot weighing:

0.1 %

± 3.1 %

D. Total uncertainty at the 99% confidence level:

Notes:

- See reverse side for leak test(s) performed on this source.

- IPL participates in a NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).
- Nuclear data was taken from IAEA Technical Reports Series No. 261, 1986.
- This solution has a working life of 5 years.

Quality Control Date Signed

IPL Ref. No.:

943-3

ISO 9001 CERTIFIED ~

S	Ξ	V	Ĺ	k	T.	Î,
1	I	R	E	N	T	
	5	3	ě.	CE	8	

ISOTOPE RECORD FORM

1) Isotope Thzz9 2) Reference Number 5 (9	72
3) Half Life 7346 ± 160 years 4) Storage Location Actal	2
5) Source Identification Number 742290 2 A000	
CALIBRATION DATA	*******
6) Activity as Received Units 20.03 n C/19	A STATE OF THE STA
7) Overall Uncertainty Percent 3, 172	
8) Reference Date / Time 67-1-02 12,00 PS T	(12:00pm)
9) Activity dpm/g 44466.6 ± 1378.40	e demig
10) Volume or Mass (mL/(g)) 4, 95606 g 11) Calibrated by I_50+ope Frod	' (
11) Calibrated by <u>I.50+ope</u> frod	ucts
12) Certificate Solution Number 943-3	
**************************************	*******
13) Date Received 6/13/62	
14) Surveyed by	
15) Survey reading (Beta/Gamma) cpm	M
16) Survey Reading (Alpha) cpm < 100 Cpr	1
17) Activity Conversion 20.03 p Ci/g * 2, ZZ × 163 dpm/	10=44466,6±1378.41
18) Remarks	
19) Isotope File Updated by	4102
20) QC Approved	

FORM NO.:CC-008, 8/00, Rev# 3

6/14/02 1:32	::08 PM		Stand	ard M	aterial	S		
		/15/02,SMIdetifier I	ike: TH22902 Density		Suppliers , Ex	cluding Consumed Std ,0	Order by SMId Rec Date	entifier Ref Date
SM Identifier TH22902A000	SM Identifier2	4.95606 G	Density		ISOTOPE	943-3	6/13/02	7/1/02
TH22902A000	TH-229	4.4467E+04 ±	1.378E+03 D	-,		Decayed Activity:	4.4467E+04	± 1.378E+03
						Total Activity	2 2038E+00	אסת

STL Richland, Standard Materials v4.5.2

Page 1

Record Count: 1

	eral Information
Chemical Name: NITRIC ACID	Chemical formula: HNO3
Chemical Family: Inorganic Acid	CAS No: 7697-37-2
Proper DOT shipping name: Nitric Acid Solution	DOT Hazard classification: Class B
Manufacturer: Mallinckrodt Baker, Inc	Manufacturer's Phone Number: (800) 582-2537
Manuf.'s Address: 222 Red School Lane, Phillipsburg, NJ 08	
24-hour emergency phone number: (908) 859-2151	Chemtrec Phone Number: 1-800-424-9300
Compo	osition/Ingredients
Nitric Acid: Up to 40%	Threshold Limit Value: 2 Parts Per Million (PPM) 5mg/m3
Physical an	nd Chemical properties
Boiling Point: 121 C	Evaporation rate of H2O: N/A
Vapor Density: 2 to 3 G/L,	Specific Gravity (H2O=1): 1.41
Colorless to pale yellow liquid with suffocating odor	Vapor pressure 62 at 20 degree C mmHg
Solubility in water: Infinite	pH: 0-3.0
Fire & Ex	xplosion Hazard Data
Flash Point: N/A	Auto ignition temperature; N/A
Extinguishing Medium: Water Spray	Flammable Units: N/A
Special fire fighting procedure: Full protective and NIOSH ap	
* May produce airborne radioactive materials during fire. C	Consult Health Physics/Radiation Safety Staff
Нага	rds Identification
Local effects: Corrosive-inhalation, skin, eyes, ingestion	Corrosive- 100ppm immediately dangerous to life and health
Routes of e	exposure and First Aid
If inhaled-remove to fresh air	If swallowed-wash out mouth with water
In case of contact with eyes- Flush with plenty of water	In case of skin contact-Immediately wash with soap and water
Stabil	lity and Reactivity
Stability: Stable	Condition to avoid: High heat, react exothermically w/water
	metallic powders, carbides, hydrogen suifide, combustible organics.
Hazardous Decomposition products: Upon heating, evolve N	Ox and hydrogen nitrate; react with steam to produce corrosive fumes
	tal Release Measures
Ventilate area of leak or spill, Isolate hazard area and wash sp	pill site after material pickup is complete. Wear protective equipment.
	dling and Storage
Protect from physical damage.	tightly closed containers. Ensure good ventilation at the workplace.
Exposure Cor	ntrols/Personal Protection
OSHA Permissible Exposure Limit (PEL) – 2ppm	ACGIH Threshold Limit Value - 2ppm TWA
Personal protective equipment and general protective and hyp	gienic practices should be fallowed when handling this material.
Environment	tal Protection Procedures
Spill response: Assure adequate ventilation in area of spill or with alkaline material (soda ash, lime). Treat as radioactive s	positive pressure SCBA as required. Flush with water and neutralize pill.
the state of the s	e Disposal Method
Radioactive material. Notify Health Physics/Radiation Safety	y Officer
Prote	ective Equipment
Eye Protection: Chemical Safety Goggles, emer. wash facility	y Skin Protection: Gloves, Apron or Lab Coat
Respiratory Protection (Special type): Consult with HP Staff	Ventilation Recommended: Consult HP staff
Other precaution: Handling of this material should be done in	n according with prescribed radioactive materials handling procedures
Spe	ecial Precaution
Hygienic Practices in handling and storing: Store in cool, dry physics/Radiation Safety Officer.	y storage area. Protect from physical damage. Consult with Health -
Procedures for Repair & Maintenance of contaminated equip radioactive contamination problem.	oments: Consult with Health Physics. Treat contaminated equipment as
CAUTION: Contains radioactive material, which, althou	gh beyond the scope of MSDS requirements, should be considered ally by trained individuals in conformance with 10CFR requirements.

Isotope Products Laboratories 1 October 2001

Vist	Prep: 5/25/05 to	5/27/							ractio				#FractionId	entifier	
ial Identifier	Constituent				W 1 -W -	LING, H	Std Wt U				···		 	d Activity/Con-	centratio
	Parent Star				······································	Ref:	5/23/200		2.1803E				 M/G	<u> </u>	
HSO0032	TH-229			<u>+</u> 1.275	E_01		0.1859	g						± 6.858E-01	DPM
1500032	111-225			$\frac{\pm 1.2.75}{0 \pm 4.05}$				<u>8</u>	4.0532E				 .10002701	2 0.000E 01	L71 1V
		4.00	OELTOG	O <u>T</u> 4.00.	36,400	0 (1)	'		4.00021	.+000	, 4.00	OELTOU			
	-														
		÷													

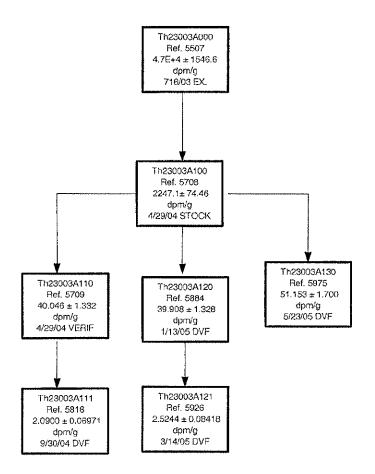
'ial Identifier	Constitue	it Prop Activit	y/Concentration		d Wt Used	, (ep,2eou)	ed TO Date		cayed Activity/Conc	entration
	Parent S	tandard: TH2	8003A130	Ref: 5/2	3/2005	5.1153E+0	1 ± 1.700	DE+00 DPM/G		
HSO0032	TH-230	4.0820E+00	± 1.359E-01	DPM 0.	0798 g	11/1/2005	11/1/2005	Armstron 5,1153E	+01 ± 1.700E+00	DPM/
		4.0820E+0	000 ± 4.082E+0	00 (1)		4.0820E+	000 , 4.082	20E+000		

Record Count: 2

Page 2

STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

Th23003A



TH23003A

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	5/23/2005
3) Source Identification Number / Ref. Number	TH23003A100	5708
4) Source Activity (dpm ± dpm/g)	2.2471E+03 ±	7.446E+01
5) Percent error of Source Activity	3.314 %	
6) Weight of Source Material used (g)	3.1833	
7) (% Error) of Weight of Source Material used	0.1508 %	
8) Diluent	2M HNO3-P0500135	
9) Total Weight of the Dilution (g)	139.84	
10) (% Error) of Total Weight of the Dilution	0.2145 %	
11) Specific Activity of Diluted Solution dpm/g	5.1153E+01 ±	1.700E+00
12) Total Uncertainty	%	
,		
13) Dilution Identification Number / Ref. Number	TH23003A130	5975
	<i>TH23003A130</i> 5/23/2005	5975
13) Dilution Identification Number / Ref. Number		5975 5/23/2005
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	5/23/2005	
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date15) Isotope Inventory File update by/date	5/23/2005 W.G	5/23/2005
 13) Dilution Identification Number / Ref. Number 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 	5/23/2005 W.G sew	5/23/2005
 13) Dilution Identification Number / Ref. Number 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 	5/23/2005 W.G sew	5/23/2005
 13) Dilution Identification Number / Ref. Number 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1161 	5/23/2005 W.G sew 18) Exhausted	5/23/2005
 13) Dilution Identification Number / Ref. Number 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1161 CALCULATIONS	5/23/2005 W.G sew 18) Exhausted	5/23/2005
 13) Dilution Identification Number / Ref. Number 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1161 CALCULATIONS 7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 16 	5/23/2005 W.G sew 18) Exhausted	5/23/2005

Form: CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	3/14/2005
3) Source Identification Number / Ref. Number	TH23003A120	5884
4) Source Activity (dpm ± dpm/g)	3.9908E+01 ±	1.328E+00
5) Percent error of Source Activity	3.327 %	
6) Weight of Source Material used (g)	8.5965	
7) (% Error) of Weight of Source Material used	0.0558%	
8) Diluent	2M HNO3-P0500135	
9) Total Weight of the Dilution (g)	135.9	
10) (% Error) of Total Weight of the Dilution	0.2208 %	
11) Specific Activity of Diluted Solution dpm/g		8.418E-02
12) Total Uncertainty	3.335 %	
13) Dilution Identification Number / Ref. Number	TH23003A121	5926
14) Calibration Reference Date	3/14/2005	
15) Isotope Inventory File update by/date	W.G	3/14/2005
16) Reviewed by/date	SEW	3/14/2005
17) Location QCLAB/STWT1125	18) Exhausted	
**************************************	**************************************	
CALCULATIONS	;	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	I / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 + 9	% error of Wt. Used^2 + % error o	f Dilution Wt.^2)

Form: CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared		1/13/2005
3) Source Identification Number / Ref. Number	TH23003A100		5708
4) Source Activity (dpm ± dpm/g)	2.2471E+03	_ ±	7.446E+01
5) Percent error of Source Activity	3.314	_%	
6) Weight of Source Material used (g)	2.4647		
7) (% Error) of Weight of Source Material used	0.1947	_%	
8) Diluent	2M HNO3-P0400766	_	
9) Total Weight of the Dilution (g)	138.78		
10) (% Error) of Total Weight of the Dilution	0.2162	_%	
11) Specific Activity of Diluted Solution dpm/g	3.9908E+01	<u>+</u>	1.328E+00
12) Total Uncertainty	3.327	_%	
13) Dilution Identification Number / Ref. Number	TH23003A120		5884
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	TH23003A120		5884
•		·	5884 1/13/2005
14) Calibration Reference Date	1/13/2005		
14) Calibration Reference Date15) Isotope Inventory File update by/date	1/13/2005 W.G	-	1/13/2005
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	1/13/2005 W.G SEW		1/13/2005
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	1/13/2005 W.G SEW	*****	1/13/2005
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1105 	1/13/2005 W.G SEW 18) Exhausted	*****	1/13/2005
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1105 CALCULATIONS	1/13/2005 W.G SEW 18) Exhausted	****	1/13/2005
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1105 CALCULATIONS 7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 1	1/13/2005 W.G SEW 18) Exhausted	 -**************	1/13/2005

Form:

CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	9/30/2004
3) Source Identification Number / Ref. Number	TH23003A110	5709
4) Source Activity (dpm ± dpm/g)	4.0046E+01 ±	1.332E+00
5) Percent error of Source Activity	3.327 %	
6) Weight of Source Material used (g)	6.9826	
7) (% Error) of Weight of Source Material used	0.0687%	
8) Diluent	2M HNO3-P0400528	
9) Total Weight of the Dilution (g)	133.79	
10) (% Error) of Total Weight of the Dilution	0.2242 %	
11) Specific Activity of Diluted Solution dpm/g	2.0900E+00 ±	6.971E-02
12) Total Uncertainty	3.335 %	
13) Dilution Identification Number / Ref. Number	TH23003A111	5818
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	TH23003A111 9/30/2004	5818
,		5818 9/30/2004
14) Calibration Reference Date	9/30/2004	
14) Calibration Reference Date15) Isotope Inventory File update by/date	9/30/2004 W.G	9/30/2004
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	9/30/2004 W.G SEW	9/30/2004
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	9/30/2004 W.G SEW	9/30/2004
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1059 	9/30/2004 W.G SEW 18) Exhausted	9/30/2004
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT1059 CALCULATIONS	9/30/2004 W.G SEW 18) Exhausted	9/30/2004
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location OCLAB/STWT1059 CALCULATIONS 7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 16)	9/30/2004 W.G SEW 18) Exhausted	9/30/2004

Form: CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	4/29/2004
3) Source Identification Number / Ref. Number	TH23003A100	5708
4) Source Activity (dpm ± dpm/g)	2.2471E+03 ±	7.446E+01
5) Percent error of Source Activity	3.314 %	
6) Weight of Source Material used (g)	2.4577	
7) (% Error) of Weight of Source Material used	0.1953 %	
8) Diluent	2M HNO3-P0400176	
9) Total Weight of the Dilution (g)	137.91	
10) (% Error) of Total Weight of the Dilution	0.2175 %	
11) Specific Activity of Diluted Solution dpm/g	4.0046E+01 ±	1.332E+00
12) Total Uncertainty	3.327 %	
13) Dilution Identification Number / Ref. Number	TH23003A110	5709
13) Dilution Identification Number / Ref. Number14) Calibration Reference Date	TH23003A110 4/29/2004	5709
•	No. of the last of	5709 4/29/2004
14) Calibration Reference Date	4/29/2004	
14) Calibration Reference Date15) isotope Inventory File update by/date	4/29/2004 W.G	4/29/2004
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	4/29/2004 W.G D.M.	4/29/2004
14) Calibration Reference Date15) Isotope Inventory File update by/date16) Reviewed by/date	4/29/2004 W.G D.M.	4/29/2004
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT0990 	4/29/2004 W.G D.M. 18) Exhausted	4/29/2004
 14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT0990 CALCULATIONS	4/29/2004 W.G D.M. 18) Exhausted	4/29/2004
14) Calibration Reference Date 15) Isotope Inventory File update by/date 16) Reviewed by/date 17) Location QCLAB/STWT0990 CALCULATIONS 7) % Error of Wt. used = (0.0048 / Weight of Source Material used * 10.0048 / Weight of Source Mater	4/29/2004 W.G D.M. 18) Exhausted	4/29/2004

Form: CC-006, 7/15/99, Rev 3

ISOTOPE DILUTION RECORD

1) Prepared by W.G	2) Date Prepared	4/29/2004
3) Source Identification Number / Ref. Number	TH23003A000	5507
4) Source Activity (dpm ± dpm/g)	4.6866E+04 ±	1.547E+03
5) Percent error of Source Activity	3.3 %	
6) Weight of Source Material used (g)	5.0580	
7) (% Error) of Weight of Source Material used	0.0949 %	
8) Diluent	2M HNO3-P0400176	
9) Total Weight of the Dilution (g)	105,49	
10) (% Error) of Total Weight of the Dilution	0.2844 %	
11) Specific Activity of Diluted Solution dpm/g	2.2471E+03 ±	7.446E+01
12) Total Uncertainty	3.314 %	
13) Dilution Identification Number / Ref. Number	TH23003A100	5708
14) Calibration Reference Date	4/29/2004	
15) Isotope Inventory File update by/date	W.G	4/29/2004
16) Reviewed by/date	D.M.	6/2/2004
17) Location QCLAB/STWT0989	18) Exhausted	
	*****	*
CALCULATIONS	5	
7) % Error of Wt. used = (0.0048 / Weight of Source Material used	* 100)	
10) % error of Dilution Wt. = (0.3 / Total Weight of Dilution * 100)		
11) Specific Activity = Source Activity * Wt. of Source Material used	d / Total Wt. of the Dilution	
12) % Total Uncertainty = (% error of Source Activity ^2 +	% error of Wt. Used^2 + % error of	of Dilution Wt.^2)

Form:

CC-006, 7/15/99, Rev 3

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ISOTOPE RECORD FORM

1) Isotope	TH230	2) Reference Number	5507						
3) Half Life	7.54E4 yrs	4) Storage Location	Std Lab						
5) Source Id	lentification Number_	TH23003A000							
******	**************************************								
6) Activity as	Received Units	3.979E+03 dps							
	certainty Percent	3.30%							
8) Reference		7/16/2003 12:0	00 EST (9:00AM)						
9) Activity dp	om/g	4.6866E+04 ± 154	46.59 (3.3%) dpm/g						
10) Volume or	· Mass (ml/g)	5.09	9407g						
11) Calibrated	l by	ANALY							
12) Certificate	Solution Number	66538-310							
*******	**************************************								
13) Date Rece	əived		7/18/2003						
14) Surveyed		W.G							
15) Survey Re	eading (Beta/Gamma)	срт	<100 CPM						
16) Survey Re	eading (Alpha) cpm		<100 CPM						
*****	*********	*************	************						
17) Activity C	17) Activity Conversion3979.0 dps x60sm/5.09407g=4.7E+04± 1546.6 (3.3%)dpm/g								
18) Remarks	18) Remarks USED ALL TO MAKE FIRST DILUTION 4/29/4 WG								
19) Isotope F	File Updated by	W.G	7/29/03						
20) QC Appro	oved	SEV	V 8/1/03						

ANALYTICS



1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318 · U.S.A.

> Phone (404) 352-8677 Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

66538-310

Th-230 5 mL Liquid in Flame Sealed Vial

radionuclide source prepared standard gravimetrically from a calibrated master solution. master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:

Th-230

ACTIVITY (dps):

3.979 E3

HALF-LIFE:

7.538 E4 years

CALIBRATION DATE:

July 16, 2003 12:00 EST

RELATIVE EXPANDED

UNCERTAINTY (k=2):

3.3%

Impurities:

y-impurities <0.1%, α-impurities <0.23%

5.09407 grams 0.5M HNO3 solution.

Master Solution ID#: P86V105

P O NUMBER 1875386-000 OP, Item 1

SOURCE PREPARED BY: UTarwaeva

M. Taskaeva, Radiochemist

Q A APPROVED:

DM. Moto 7-16-03

5/26/2006 12:06:18 PM

Standard Material Fractions (Vials)

Vial Prep: 5/25/05 to 5/27/06,SMFractionIdentifier Between THTC9385 and THTC9390, Order by SMIdentifier,ConstituentCode,SMFractionIdentifier

Vial Identifier	Constitue	nt Prep Activity/	Concentration		Std Wt U	sed	Prep,Deca	yed To Date	Prep by Std Decay	ed Activity/Conce	ntration
	Parent S	Standard: TH234	06B100	Ref:	2/24/2006	5	4.9160E+0	03 ± 3.176	E+02 CPM/G		
THTC9385	TH-234	4.9936E+02	± 3.226E+01	CPM	0.2735	g	3/30/2006	3/30/2006	Armstron 1.8258E+03	3 ±1.179E+02	CPM/G
THTC9386	TH-234	5.0045E+02	± 3.233E+01	CPM	0.2741	g	3/30/2006	3/30/2006	Armstron 1.8258E+0	3 ± 1.179E+02	CPM/G
THTC9387	TH-234	5.0281E+02	± 3.248E+01	CPM	0.2754	g	3/30/2006	3/30/2006	Armstron 1,8258€+0	3 ± 1.179E+02	CPM/G
THTC9388	TH-234	5.0044E+02	± 3.233E+01	CPM	0.2741	g	3/30/2006	3/30/2006	Armstron 1.8258E+03	3 ± 1.179E+02 ೄ	CPM/G
THTC9389	TH-234	5.0099E+02	± 3.236E+01	СРМ	0.2744	g	3/30/2006	3/30/2006	Armstron 1.8258E+0	3 ± 1.179E+02	CPM/G
THTC9390	TH-234	5.0080E+02	± 3.235E+01	СРМ	0.2743	g	3/30/2006	3/30/2006	Armstron 1.8257E+0	3 ± 1.179E+02	CPM/G

5.0081E+002 ± 1.133E+000 (6)

0.226% 4.9936E+002, 5.0281E+002

STL Richland, SMFractions v4.8.12

* - Isotope is an Impurity

Page 1

Record Count: 6



Memorandum

Date:

27 February 2006

To:

Count Room & Team Leaders

From:

Tim Armstrong

Subject:

New Th-234 Source {Th23406B100 #6058}

There is a new Th-234 source Th23406B100 #6058

With a reference date of 24 February 2006

CAL ID	GRAMS FOUND	REFERENCE DATE
CAL5734	0.0757	24 Feb 06
CAL5735	0.0762	24 Feb 06
CAL5736	0.0749	24 Feb 06
CAL5737	0.0744	24 Feb 06

TH-234 CALIBRATION CALCULATIONS

Std ID:

TH23406B100 #6058

Date:

24-Feb-06

Tracer Yield Calculations

Th-230 Isotopic Counts

		111-2-	oo lootopii	, , , , , , , , , , , , , , , , , , , 						
	Th-23	30	Background			Expected				
Vial	Counts	Min	Counts	Min	Net cpm	Det. Eff	dpm	Yield		
		999	2	999	6.517	0.2908	25.131	0.8917		
CAL5734	6512					0.2995	25.075	0.8478		
CAL5735	6362	999	22	999	6.366					
CAL5736	5029	999	1	999	5.033	0.2537	25.065	0.7915		
CAL5737	4630	999	0	999	4.635	0.2481	25.045	0.7459		
UMLUIUI	1000				······································					

0

22-Feb-06 = Source Reference Date

12:00 = Source Reference Time

SET 30A-30D Reference Data

Thorium Beta Data

			Background					Th234 wt.	Th230 Th234		
	Th-23	-	Min	Cts	Min	Net com	Decay	grams	Yield	cpm/g	Vial
Date	Time	Cts				301.86	1.0528	0.0757	0.8917	4707.95	CAL5734
24-Feb-06	6:54	6064	20	668	500			0.0762	0.8478	4583.36	CAL5735
24-Feb-06	6:54	5656	20	779	500	281.24	1.0528			5222.00	CAL5736
24-Feb-06	6:54	5910	20	721	500	294.06	1.0528	0.0749	0.7915		
24-Feb-06	6:54	5452	20	545	500	271.51	1.0528	0.0744	0.7459	5150.78	CAL5737

ī	Th234 YIELD CORREC	TION FOR DATA HANDLERS
1	Th234 wt.	g * Th230 YIELD
Ì	CAL5734	0.0675
	CAL5735	0.0646
	CAL5736	0.0593
	CAL5737	0.0555

4916.02	Average
6.46%	%RSD
-6.77%	Min Bias
6.22%	Max Bias

SEVERN

TRENT

SERVICES

0.0000

14 0460E±03	= Rad Calc. expected value, cpm/g
4.91000.00	= Total Error of Rad Calc. expected value
	= Reference Date of Rad Calc. expected value
12:00	= Reference Time of Rad Calc. expected value

385

SEVERN	CT	' 1
TRENT		<u> </u>

COUNTING REQUEST

	~ · · · · · · · · · · · · · · · · · · ·	count time:			units:
Beta	~	count time:	Geom.:		units:
Gamma	c: <u>//</u>	count time:	Georgi		units: dpm/Sa
Alpha Spe	c:	Codin time. 7000			
_	Λ.Δ	Date submitted:_	2/24/0	6	
Requested by:		. Date sub-inter-			
	Sample ID	Isotopes of inter	est <u>·-</u>	Sample Date	•
	201 201	Th23406B100 I	1	 	
17:	1	11,6370031002			
172					
17	3 5736				
17	4 5737				
17	5 5738	M234 only			
	6 5739		•		
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ADDITIONAL INSTR					
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THORIUM BETA DATA FORM

SEVER TREN SERVICES	THE STATE OF THE S	37 <i>068 100</i>		Requested by	y: 1294	·	BE	TA
	DOM:	7 (00 B (00		Lab Tech:		T	Analysis:	
Sample ID	Vial Code	TH-234 WT.	Date-lime Counted	Set ID	Gross Counts	Counting Time	Bkg, Counts	Count Room Tech
CAL5734								
		, , ,						·
5135						1.		
F121								
5736								·
5737						THE REAL PROPERTY OF THE PROPE		
		-						
5738		-		,				
5139							,	
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						<u> </u>		

Thorium Yield Determination by Beta-emitting Th-234 tracer

Reference Tracer Data: Ref. Date: 21-Nov-05

	Beta	Gross	Count	Bkg	Bkg	Bkg	Grams	SrY-90	DPM/g of
Ref. ID	Detector	Counts	Time		il		Found	Eff	Tracer
CAL5683	30A	5268	20	668	500	1.3360	0.9794	0.4482	597.02
CAL5684	30B	6135	20	779	500	1.5580	1.2674	0.4568	527.11
CAL5685	30C	6118	20	721	500	1,4420	1.2284	0.4464	555.18
CAL5686	30D	5509	20	545	500	1.0900	1.1215		
		[Average DP	M/g of tracer =	556.92

Sample Tracer Data:							
	Tracer	DPM					
VIAL ID	Mass	Tracer					
CAL5734	0.0757	42.16					
CAL5735	0.0762	42.44					
CAL5736	0.0749	41.71					
CAL5737	0.0744	41.44					
CAL5738	0.0754	41,99					
CAL5739	0.076	42.33					
		0.00					
		0.00					
		0.00					
		0.00					
		0.00					
		0.00					
		0.00					
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FORM NO. RC-103, REV. 2, 10/95

Vial Identifier	Constitue	nt Prep Activity	/Concentration		Std Wt L	Std Wt Used		Prep,Decayed To Date Prep by Std Decayed Activity/Concentration					
	Parent S	Standard: TH234	106B100	Ref:	2/22/2000	3	7.5458E+	03 ± 2.919	E+02 CPM/G				
CAL5734	TH-234	5.3328E+02	<u>+</u> 2.065E+01	СРМ	0.0757	g	2/24/2006	2/24/2006	Armstron 7.0446E+03	± 2.725E+02	CPM/G		
CAL5735	TH-234	5.3677E+02	± 2.079E+01	СРМ	0.0762	g	2/24/2006	2/24/2006	Armstron 7.0442E+03	± 2.725E+02	CPM/G		
CAL5736	TH-234	5.2760E+02	± 2.044E+01	СРМ	0.0749	g	2/24/2006	2/24/2006	Armstron 7.0441E+03	± 2,725E+02	CPM/G		
CAL5737	TH-234	5.2408E+02	± 2.030E+01	CPM	0.0744	g	2/24/2006	2/24/2006	Armstron 7.0440E+03	± 2.725E+02	CPM/G		
CAL-5738	TH-234	5.3111E+02	± 2.057E+01	СРМ	0.0754	g	2/24/2006	2/24/2006	Armstron 7.0440E+03	± 2.725E+02	CPM/G		
CAL5739	TH-234	5.3534E+02	± 2.073E+01	СРМ	0.076	g	2/24/2006	2/24/2006	Armstron 7.0439E+03	± 2.725E+02	CPM/G		

5.3136E+002 ± 4.816E+000 (6)

0.906% 5.2408E+002 , 5.3677E+002

STL Richland, SMFractions v4.8.12

* - Isotope is an Impurity

2/24/2006 9:29:53 AM

Standard Material Fractions (Vials)

Vial Prep: 2/23/05 to 2/25/06,SMFractionIdentifier Between cal5734 and cal5739, Order by SMIdentifier,ConstituentCode,SMFractionIdentifier

Vial Identifier	Constituer	nt Prep Activity	/Concentration		Std Wt L	sed	Prep,Decayed To Date Prep by Std Decayed Activity/Concentration					
	Parent S	tandard: TH230	03A130	Ref:	5/23/2005	3	5.1153E+	01 ± 1.700	E+00 DPM/G			
CAL5734	TH-230	2.5131E+01	± 8.352E-01	DPM	0.4913	g	2/24/2006	2/24/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G	
CAL5735	TH-230	2.5075E+01	± 8.334E-01	DPM	0.4902	g	2/24/2006	2/24/2006	Armstron 5.1153E+01	±1.700E+00	DPM/G	
CAL5736	TH-230	2.5065E+01	± 8.330E-01	DPM	0.49	g	2/24/2006	2/24/2006	Armstron 5,1153E+01	± 1.700E+00	DPM/G	
CAL5737	TH-230	2.5045E+01	± 8.324E-01	DPM	0.4896	g	2/24/2006	2/24/2006	Armstron 5.1153E+01	±1.700E+00	DPM/G	
CAL5738	TH-230	0.0000E+00	± 7.234E-03	DPM	0	g	2/24/2006	2/24/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G	
CAL5739	TH-230	0.0000E+00	+ 7.234E-03	DPM	0	g	2/24/2006	2/24/2006	Armstron 5.1153E+01	±1.700E+00	DPM/G	

1.6719E+001 ± 1.295E+001 (6)

77.460% 0.0000E+000 , 2.5131E+001

STL Richland, SMFractions v4.8.12

* - Isotope is an Impurity

Page 1

Record Count: 7

L RICHLAND	C.R. Analyst Date Analyzed CSP CONTROL Date Counted Date Analyzed	06	- - -	Counting T Sample	im <u>e</u>	A ISOTOPI (600A pha Analysis Report STLR	SOP's Ainutes Opera	ting: <u>RICHRDOC</u> y: <u>RICHRDOC</u>	<u>)8</u>	2/28 0912
			Th-229 (4 Tra	-			TOTAL COUNTS			
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		from Th-234 E	3eta Count (7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
	CAL 5734		10		0	See Alpha /	Analysis Report for ROI	Information	17	
	CAL 5735		10	And the second s	O	See Alpha A	Analysis Report for ROI	Information	172	
	CAL 5736		10		0	See Alpha A	Analysis Report for ROI	Information	173	
401	CAL 5737		10		O	See Alpha A	Analysis Report for ROI	Information	174	
	CAL 5738		10		O	See Alpha 1	Analysis Report for ROI	Information	175	
	CAL 5739		10		Ó	See Alpha ,	Analysis Report for ROI	Information	176	
			10		36 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	See Alpha 1	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		

0

10

Comments:

Approved by:

See Alpha Analysis Report for ROI Information

Date: 2/25/06

Th23406B100 - 6058

22-Feb-06 = Source Reference Date

8:00 = Source Reference Time

SET 27A-27D Reference Data

Thorium Beta Data

		Th-234	Bac	kground				Th234 wt.	Th234
Date	Time	Cts	Min	Cts	Min	Net cpm	Decay	grams	cpm/g
22-Feb-06	8:46	15677	20	554	500	782.74	1.0009	0.1070	7322.07
22-Feb-06	8:46	15254	20	607	500	761.49	1.0009	0.1010	7546,40
	8:46	16278	20	579	500	812.74	1.0009	0.1082	7518.38
22-Feb-06		15895	20	512	500	793.73	1.0009	0.1019	7796.42
22-Feb-06	8:46	12093	20	012					

Average 787.67	Average	7545.82
	%RSD	2.58%
	Min Bias	-2.97%
	Max Bias	3.32%

Th23406B100 - 6058

7.5458E+03	= VAX expected value, cpm/g {entered as dpm in Vax}
	= Total Error of VAX expected value
	= Reference Date of VAX expected value
8:00	= Reference Time of VAX expected value

TH-234 INITIAL DILUTION CALCULATION

(A) INITIAL BETA COUNT ACTIVITY

7545.82 cpm/g

(B) INITIAL VOLUME 520.00 mL

(C) INITIAL ACTIVITY DESIRED 5000 cpm/g

(D) PROPOSED TOTAL VOLUME 784.77 mL

(E) PROPOSED VOLUME TO ADD 264.77 mL NOT NECESSARY TO BE EXACT

{F} ACTUAL VOLUME ADDED 0.00 mL

(G) ACTIVITY 7545.82 cpm/g

A*B/C=D D-B=E

B/(B+F)*A=G

TL RICHLAND

TO CALCULATE THE NET CPM BETA AND ALPHA FOR TH234 EVALUATION

Th234 Std. ID: TH23406B100 - 6058

DATE: 2/22/2006

041401510	total	beta	Bkg. Cts.	beta Bkg.	total cts.	alpha ct. time	Bkg. Cts.	alpha Bkg.	Net beta CPM	Net Alpha CPM	1% net beta
SAMPLE ID RDQC8204	cts. Beta 15677	ct. time	554	500	6	50	17	500	782.742	0.086	7.83
RDQC8205	15254	20	573	500	2	50	12	500	761.554	0.016	7.62
RDQC8206	16278	20	495	500	3	50	12	500	812.91	0.036	8.13
RDQC8207	15895	20	453	500	5	50	23	500	793.844	0.054	7.94
									#DIV/0!	#DIV/0!	#DIV/0!
						-			#DIV/0!	#D!V/0!	#DIV/0!
									#DIV/0!_	#DIV/0!	#DIV/0!
									#DIV/0!	#DIV/0!	#DIV/0!

T. RICH	SEVERN ST TRENT ST C.R. Technician Bate Counted H03/			THO Counting T Sample	RIUA ime	MISOTOPI	CCOUNT SOP'S Ainutes Opera			-0/24 Way
	C.R. Analyst O Date Analyzed 904/10			Backgroun	d <u>See Al</u>	pha Analysis Report	Review STC	v: $\frac{2}{32}$	0 <u>16</u> TO	16003
	Date many zea		Th-229 (4 Tra				TOTAL COUNTS			
		f	rom Th-234 I		7)	Th-228 (5423 KeV)	Th-230 (4688 KeV)	Th-232 (4010 KeV)		
	WorkOrder #	ID	Activity	ROI Cts	BKG	(6)	(8)	(9)	Det #	Comment
;	Cal 5728		10		Ó	See Alpha ,	Analysis Report for ROI	Information	17/	
	Cal 5729		10		0	See Alpha .	Analysis Report for ROI	Information	172	
	Cal 5730		10		0	See Alpha	Analysis Report for ROI	Information	123	
452	Cal 5731		10		Ö	See Alpha	Analysis Report for ROI	Information	174	
			10		0	See Alpha	Analysis Report for ROI	Information	175	
	Cal \$732 Cal \$733		10		0	See Alpha	Analysis Report for ROI	Information	174	
			10		0	See Alpha	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		
			10		0	See Alpha	Analysis Report for ROI	Information		
	Comments:		1	Control of the Control of	we designed to supply the					

Form No: RC-012, 10/02, Rev 9

Approved	hv:	<u>S</u>
white a sea	رت	

Date: Ofwher

	7:29:31 PM		andaro						als) constituentCode,SMFra	ctionIdentifier	
Vial Identifier	Constituent		Concentration		Std Wt U			yed To Date			entration
	Parent Sta	ndard: TH230	03A130	Ref:	5/23/2005	5	5.1153E+	01 ± 1.700	E+00 DPM/G		
CAL5728	TH-230	2.5029E+01	± 8.318E-01	DPM	0.4893	g	2/22/2006	2/22/2006	Armstron 5,1153E+01	± 1.700E+00	DPM/G
CAL5729	TH-230	2.4809E+01	+ 8.245E-01	DPM	0.485	g	2/22/2006	2/22/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G
CAL5730	TH-230	0.0000E+00	_ _ 7.234E-03	DPM	9	g	2/22/2006	2/22/2006	Armstron 5,1153E+01	± 1.700E+00	DPM/G
CAL5731	TH-230	2.4988E+01	± 8.305E-01	DPM	0.4885	g	2/22/2006	2/22/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G
CAL5732	TH-230	0.0000E+00	± 7.234E-03	DPM	0	g	2/22/2006	2/22/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G
CAL5733	TH-230	0.0000E+00	± 7.234E-03	DPM	0	g	2/22/2006	2/22/2006	Armstron 5.1153E+01	± 1.700E+00	DPM/G

1.2471E+001 ± 1.366E+001 (6)

0.0000E+000 , 2.5029E+001

STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

Page 1

Record Count: 7

SEVERN	S		I
MARAEAN A		1	П

COUNTING REQUEST

ype of count: Alpha: _ Beta: _ Gamma: _ Alpha Spec: _		count time: count time: count time: count time:	Geom.:	units: units: units: dpm/Sa
Requested by:	W_	Date submitted:	2/22/06	· · · · · · · · · · · · · · · · · · ·
	Sample ID (AL 5728 5729 5730 5731 CAL 5732 5733	Thy obbios 6 Thy obbios 6 The 230 03A 130	058	Date
ADDITIONAL INSTRUC		iof		

THORIUM BETA DATA FORM

SEVER TREN				Requested by	: TDA		BE	TA	
SERVICES	1/4	23406 B100	# 605B	Lab Tech:			Analysis:		
Sample ID	Vial Code	· ·	Date-time Counted	Set ID	Grass Counts	Counting Time	Bkg. Counts	Count Room Tech	
CAL5728									
5729									
5730									
			-						
5731									
5132									
				·					
5133	<u> </u>								
								. •	
			·						

4 + 7060030

Thorium Yield Determination by Beta-emitting Th-234 tracer

Reference Tracer Data: Ref. Date: 21-Nov-05

	Beta	Gross	Count	Bkg	Bkg	Bkg	Grams	SrY-90	DPM/g of
Ref. ID	Detector	Counts	Time		1	CPM	Found	Eff	Tracer
CAL5683	30A	5681	20	700	500	1.4000	0.9794	0.4482	643.92
CAL5684	30B	6600	20	848	500	1.6960	1.2674	0.4568	567.02
CAL5685	300	6498	20	691	500	1.3820	1.2284	0.4464	589,93
CAL5686	30D	5956	20	633	500		1.1215		592.71
		<u> </u>					Average DP	M/g of tracer =	598.40

Sample Tracer Data:

Sample Trace	r Data:	
	Tracer	DPM
VIAL ID	Mass	Tracer
CAL5728	0.6672	399.25
CAL5729	0.6745	403.62
CAL5730	0.6749	403.86
CAL5731	0.6756	404.28
CAL5732	0.6749	403.86
CAL5733	0.6756	404.28
		0.00
		0.00
State of the		0.00
		0.00
		0.00
		0.00
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Mark William		0.00
		0,00
		0.00
		0.00
		- 0.00
		0.00

FORM NO. RC-103, REV. 2, 10/95

Vial Identifier	Constitue	nt Prep Activity	/Concentration		Std Wt U	Ised	Prep,Deca	yed To Date	Prep by Std Decayed	Activity/Conce	entration
	Parent S	standard: TH234	106B100	Ref	: 2/22/200€	3	7.5458E+	03 ± 2.919	E+02 CPM/G		
CAL5728	TH-234	5.0247E+03	± 1.944E+02	СРМ	0.6772	g	2/22/2006	2/22/2006	Armstron 7.4198E+03	± 2.870E+02	СРМ/G
CAL5729	TH-234	5.0046E+03	± 1.936E+02	CPM	0.6745	g	2/22/2006	2/22/2006	Armstron 7.4197E+03	± 2.870E+02	СРМ/С
CAL5730	TH-234	5.0075E+03	± 1.937E+02	СРМ	0.6749	g	2/22/2006	2/22/2006	Armstron 7.4196E+03	± 2.870E+02	СРМ/С
CAL5731	TH-234	5.0126E+03	± 1.939E+02	ÇPM	0.6756	g	2/22/2006	2/22/2006	Armstron 7,4195E+03	± 2.870E+02	CPM/G
CAL5732	TH-234	5.0073E+03	_ _ 1,937E+02	СРМ	0.6749	g	2/22/2006	2/22/2006	Armstron 7,4194E+03	± 2.870E+02	CPM/G
CAL5733	TH-234	5.0125E+03	± 1.939E+02	CPM	0.6756	g	2/22/2006	2/22/2006	Armstron 7.4193E+03	± 2.870E+02	CPM/G

5.0115E+003 ±7.170E+000 (6) 0.143% 5.0046E+003 , 5.0247E+003

STL Richland, SMFractions v4.8.12
*- Isotope is an Impurity

Page 2

Record Count: 12

TH-234 CALIBRATION CALCULATIONS

Std ID: TH23406B100 #6032

Date: 22-Feb-06

Tracer Yield Calculations

Th-230 Isotopic Counts

	Th-2	30	Backgı	round	Expected				
Vial	Counts	Min	Counts	Min	Net cpm	Det. Eff	dpm	Yield	
CAL5728	6200	1000	3	1000	6.197	0.2909	25.029	0.8511	
CAL5729	7470	1000	4	1000	7.466	0.2995	24.809	1.0048	
CAL5731	5190	1000	0	1000	5.190	0.2481	24.988	0.8372	

0

21-Feb-06 = Source Reference Date

12:00 = Source Reference Time

SET 30A-30D Reference Data

Thorium Beta Data

Th-234				Backg	round			Th234 wt.	h234 wt. Th230		
Date	Time	Cts	Min	Cts	Min	Net cpm	Decay	grams	Yield	cpm/g	Vial
22-Feb-06	19:12	61642	20	848	500	3080.40	1.0381	0.6772	0.8511	5547.98	CAL5728
22-Feb-06	19:12	61078	20	691	500	3052.52	1.0381	0.6745	1.0048	4675.55	CAL5729
22-Feb-06	19:12	61343	20	700	500	3065.75	1.0381	0.6756	0.8372	5626.99	CAL5731

[]	Th234 YIELD CORRECTION FOR DATA HANDLERS
	Th234 wt. g * Th230 YIELD
	CAL5728 0.5764
	CAL5729 0.6777
1	CAL5731 0.5656

5283.50 Average 9.99% %RSD -11.51% Min Bias 6.50% Max Bias

SEVERN

TRENT

SERVICES

0.0000

5.2835E+03	= Rad Calc. expected value, cpm/g
9.1450E+02	= Total Error of Rad Calc. expected value
21-Feb-06	= Reference Date of Rad Calc. expected value
12:00	= Reference Time of Rad Calc. expected value

510

Client: TL	Date: 2 22 06
Analyst: 10 Å	Comments: 7,234 06B100 #6050
Requested Count Time: 50 MIN	

FORM NO.: RC-76, 8/00, Rev. 1

THORIUM BETA DATA FORM

2/22/06

′,								01000	
	SEVE				Requested b	y: 794		BE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	SERVICE	5 1/234	06B100 #	6058	Lab Tech:	TON		Analysis: The	234
	Sample ID	Vial Code	TH-234 WT.	Date-time Counted	Set ID	Gross Counts	Counting Time	Bkg. Counts	Count Room Tech
	RDAC 87) 4	0,1010	768/ac 0846	214		ZOMIN		Co
	120C870	5	0,1010		275				
	2092820	0	0,1082		enc				
7						·	.,		
J	CDGC 890.	7-	01019		J)D		V		. 1
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								Live- m	
				1					
	<u> </u>	1	<u> </u>			1			

THORIUM CONTINUING CALIBRATION

Quality Assurance Report. Generated 26-MAY-2006 11:33:49.08

QA Filename : \$DISK1:[ALP171.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.295885 Std Deviation : 0.044263

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2954 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 8.195036 Std Deviation : 0.540977

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 9.0000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

file:///P]/Transfer/qa1_alp171_26-may-2006-11335210.txt ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00 : 345.875275 Std Deviation : 10.156054 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 342.6818 ||| 12-MAR-2006 10:09 chk -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: % Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.299046 Std Deviation : 0.022112 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 12-MAR-2006 10:09 chk 0.3018 | | | -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Generic Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00 : 5.740020 Std Deviation : 0.269663 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 5.8017 | |

Quality Assurance Report. Generated 26-MAY-2006 11:33:49.77

QA Filename : \$DISK1:[ALP171.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --: 4010, Th-232 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----: 0.000504 Std Deviation: 0.000682 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + | + |-- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.000750 : 0.000484 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0020 |In| | -- Multi-Test Full Report --: 4396, U-235 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.000387 Std Deviation : 0.000593 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg 0.0000 + 1.1-- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Std Deviation: 0.000844 ± 0.000580 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (ents/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.000565 Std Deviation : 0.000821 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rcj 13-MAR-2006 06:43 bkg 0.0010 | | -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.000542 Std Deviation : 0.000780

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.000603 Std Deviation : 0.000970

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0030 |In| |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.000783 Std Deviation : 0.001038

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0030 |In| | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.000918 Std Deviation : 0.001150 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0040 |In| -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.001334 : 0.001170 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0020 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.000857 Std Deviation : 0.000966 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.001024 Std Deviation : 0.001082 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.000936 Std Deviation : 0.001064 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej | | | | 0.000013-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----: 0.001476 Std Deviation : 0.001552 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg 0.0040 | | | -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.002162 Std Deviation : 0.002229 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg 0.0040 | | | -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.002230 : 0.002155 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 5 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0030 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units : ents/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Std Deviation: 0.016955 : 0.008312 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0030 | | | -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.006456 Std Deviation: 0.014719 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0070 | | | -- Multi-Test Full Report --: 6113, Cm-242 bkg (cnts/min) Description Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------

: 0.001523 Std Deviation : 0.002698

Mean

Measurement Time Sample		Sample Analyst	Value	LU SD UD BS Rej
12 MAD 2007 07 42	1.1	0.0020	. 	.
13-MAR-2006 06:43	bkg	0.0020		

Quality Assurance Report. Generated 26-MAY-2006 11:33:52.45

QA Filename : \$DISK1:[ALP171.QA]GROUP_2_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.296898 Std Deviation : 0.024734

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.3090 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units: channels Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 9.195036 Std Deviation : 0.590095

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 10.1667 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units: channels Parameter Type: Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 348.322205 Std Deviation : 6.338201

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 346.6237 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 0.500000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.296160 Std Deviation : 0.028161

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.3095 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.618928 Std Deviation : 0.120659

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk

5.6481

Quality Assurance Report.

Generated 26-MAY-2006 11:33:53.15

QA Filename : \$DISK1:[ALP171.QA]GROUP 2 BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

: 0.001773 Std Deviation : 0.012240 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0010 | | | 13-MAR-2006 06:43 bkg

-- Multi-Test Full Report --

: 4196, U-238 bkg (cnts/min) Description

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Std Deviation: 0.741066 : 0.082136 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + 1113-MAR-2006 06:43 bkg

-- Multi-Test Full Report --

: 4396, U-235 bkg (cnts/min) Description

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.003601 Std Deviation : 0.029706 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 13-MAR-2006 06:43 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4688, Th-230 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----: 0.012327 Std Deviation : 0.104605 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.080632 Std Deviation : 0.723888 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.079504 Std Deviation : 0.714054

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.051116 Std Deviation : 0.457260

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (ents/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.005647 Std Deviation : 0.044590

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.014760 Mean : 0.002378 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 | | | -- Multi-Test Full Report --: 5155, Pu-239 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.083496 Std Deviation: 0.744496 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide

---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Std Deviation: 0.031422 : 0.004341 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 + | + |13-MAR-2006 06:43 bkg -- Multi-Test Full Report --: 5305, Po-210 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----: 0.002610 Std Deviation : 0.014632 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 13-MAR-2006 06:43 bkg $0.0000 \mid | \mid |$ -- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----: 0.002793 Std Deviation : 0.015730 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.013641 Std Deviation : 0.110616

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.072768 Std Deviation : 0.642738

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (ents/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.080268 Std Deviation : 0.711060

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Std Deviation: 0.603462 Mean : 0.071181 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0030 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.128425 Std Deviation : 1.131168 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

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Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.082925 Std Deviation : 0.739079

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:33:55.63

QA Filename : \$DISK1:[ALP171.QA]GROUP_3_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.258018 Std Deviation : 0.004585

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2552 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 8.177536 Std Deviation : 0.494915

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 9.0000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units: channels Parameter Type: Peak

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 335.632294 Std Deviation : 3.454323

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk

334.5636 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 0.500000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.256734 Std Deviation : 0.017491

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2560 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.930007 Std Deviation : 0.165146

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk

5.9762 | | |

Quality Assurance Report.

Generated 26-MAY-2006 11:33:56.30

QA Filename : \$DISK1:[ALP171.QA]GROUP 3 BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000167 Std Deviation: 0.000376

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (ents/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

: 0.000150 Std Deviation: 0.000360 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + 1113-MAR-2006 06:43 bkg

-- Multi-Test Full Report --

: 4396, U-235 bkg (cnts/min) Description

Parameter Units : cnts/min Parameter Type : Nuclide

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000167 Std Deviation : 0.000376 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 13-MAR-2006 06:43 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000384 Std Deviation: 0.000585 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 + +13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000334 Std Deviation: 0.000510 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000250 Std Deviation : 0.000474

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000350 Std Deviation : 0.000634

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000417 Std Deviation : 0.000788

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Start Date Std Deviation: 0.000764 : 0.000400 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 -- Multi-Test Full Report --: 5155, Pu-239 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000551 Std Deviation: 0.000791 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --: 5275, Am-243 bkg (cnts/min) Description

SIE://IR IGHILA NDip171_26-may-2006-11335837.txt (6 of 10)5/26/2006-651:16 AM

Parameter Units : cnts/min Parameter Type : Nuclide

---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000725 Mean : 0.000517 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000793 Mean : 0.000517 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000551 Std Deviation : 0.000853 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 + 1113-MAR-2006 06:43 bkg -- Multi-Test Full Report --

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001051 Std Deviation : 0.001172

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001118 Std Deviation : 0.001291

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.001034 Std Deviation : 0.001208

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + 11-- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.002319 Std Deviation: 0.003284 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.001919 Std Deviation : 0.003556 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0040 | | | -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

 $file: ///P | / Transfer/qa3_alp171_26 - may - 2006 - 11335837.txt$

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000984 Std Deviation : 0.001569

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

Generated 26-MAY-2006 11:33:58.95 Ouality Assurance Report. : \$DISK1:[ALP171.QA]GROUP_4_CHK.QAF;1 QA Filename -- Multi-Test Full Report --: Efficiency, Pu-239 Description Parameter Type: Generic Parameter Units: % Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.041614 : 0.250090 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.2647 | | | 12-MAR-2006 10:09 chk -- Multi-Test Full Report --: Constant FWHM Description Parameter Type: Generic Parameter Units : channels Action Level: 3.000000 Investigate Level: 2.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.826300 9.187500 Mean Sample ID Sample Analyst Value LU|SD|UD|BS Rej Measurement Time 10.5000 12-MAR-2006 10:09 chk -- Multi-Test Full Report --Description : Centroid, Am-241 Parameter Units : channels Parameter Type : Peak

SIT:1//PCTGHSterA.N_Dtp171_26-may-2006-11340185.txt (1 of 10)5/26/20065491:31 AM

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 336.650543 Std Deviation : 6.541206

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 334.0021 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 0.500000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.252800 Std Deviation : 0.025977

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2585 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units: keV/chan Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.511713 Std Deviation : 0.159703

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

......

12-MAR-2006 10:09 chk

5.4870 | | |

Quality Assurance Report.

Generated 26-MAY-2006 11:33:59.90

QA Filename : \$DISK1:[ALP171.QA]GROUP_4_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date

: 30-MAY-2030 00:00

Mean

: 0.000200

Std Deviation: 0.000448

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

0.0000 + 1 + 1

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000146

Std Deviation: 0.000405

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

0.0010 |In| |

-- Multi-Test Full Report --

Description

: 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000164 Std Deviation : 0.000420 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 |Ac| | E Wanium 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000561 : 0.000382 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000328 Std Deviation : 0.000611 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + 11

13-MAR-2006 06:43 bkg

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000273 Std Deviation : 0.000526

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000309 Std Deviation : 0.000574

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000237 Std Deviation : 0.000470

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Ouality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000404 : 0.000200 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 0.0010 | | | 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000400 Std Deviation: 0.000656 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 | | | -- Multi-Test Full Report --

Parameter Units : cnts/min Parameter Type : Nuclide

Description

: 5275, Am-243 bkg (cnts/min)

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.000417 : 0.000218 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg -0.0000-- Multi-Test Full Report --Description : 5305, Po-210 bkg (ents/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000291 Std Deviation: 0.000498 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + 1.000-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000346 Std Deviation: 0.000480 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + | + |-- Multi-Test Full Report --

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000564 Std Deviation : 0.000789

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000692 Std Deviation : 0.001035

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000655 Std Deviation : 0.001005

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002039 Std Deviation : 0.003473

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0090 |In| |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.002020 Std Deviation : 0.004020

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0090 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

file:///P//Transfer/qa4_alp171 26-may-2006-11340185.txt

Start Date : 27-FEB-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000564 Std Deviation : 0.000959

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0020 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:34:05.31

QA Filename : \$DISK1:[ALP171.QA]GROUP_6_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.295844 Std Deviation : 0.018810

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.3003 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.032680 Std Deviation : 0.448478

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 7.8333 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 348.843414 Std Deviation : 3.293956

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 347.6739 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.298396 Std Deviation : 0.018839

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2992 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 6.041460 Std Deviation : 0.024370

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 6.0180 | | Generated 26-MAY-2006 11:34:06.02 Quality Assurance Report. QA Filename : \$DISK1:[ALP171.QA]GROUP_6_BKG.QAF;1 -- Multi-Test Full Report --: 4010, Th-232 bkg (cnts/min) Description Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 1-JAN-2002 00:00 End Date : -----Start Date Std Deviation: 0.000718 : 0.000484 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg $0.0000 + | \cdot |$ 14-MAR-2006 05:18 bkg 0.0000 20-MAR-2006 06:25 bkg 0.0010 -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.000316 Std Deviation : 0.000510 Mean

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
13-MAR-2006 06:43 14-MAR-2006 05:18 20-MAR-2006 06:25	bkg	0.0000 0.0000 0.0010	iii	

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean

: 0.000462 Std Deviation : 0.000798

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

0.0000 + 1 + 1

14-MAR-2006 05:18 bkg

0.0000 + +

20-MAR-2006 06:25 bkg

0.0000 + 1

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean

: 0.000557 Std Deviation : 0.000738

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Page: 2

Quality Assurance Multi-Test Full Report (continued)

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg

0.0030 |Ac|

0.0010 | | |

20-MAR-2006 06:25 bkg

0.0010

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.000332 Std Deviation : 0.000490						
Measurement Time Sample ID Sample						
13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg	0.0010 0.0000 0.0000					
Multi-Test Full Report						
Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide						
Investigate Level: 2.000000 Action Level: 3.000000						
Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.000366 Std Deviation : 0.000530						
Measurement Time Sample ID Samp						
13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg	0.0020 0.0000 0.0000	Ac 				
Multi-Test Full Report						
Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide						
Investigate Level: 2.000000 Action Level: 3.000000						
Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.000421 Std Deviation : 0.000669						
Measurement Time Sample ID Samp	le Analyst	Value	LU SD UD BS Rej			
13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg	0.0020 0.0000 0.0000					

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.000448 Std Deviation : 0.000756

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0020 |In| | 14-MAR-2006 05:18 bkg 0.0000 | | | 20-MAR-2006 06:25 bkg 0.0000 | |

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : -----

Mean : 0.000437 Std Deviation : 0.000708

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------: 0.000669 Std Deviation: 0.000794 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + | + |14-MAR-2006 05:18 bkg 0.0010 | | | 20-MAR-2006 06:25 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.000703 Std Deviation: 0.000782 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 14-MAR-2006 05:18 bkg 0.0010 20-MAR-2006 06:25 bkg 0.0020 | | | -- Multi-Test Full Report --: 5305, Po-210 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : ------Mean : 0.000789 Std Deviation: 0.000771 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Page: 4 Quality Assurance Multi-Test Full Report (continued) Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 13-MAR-2006 06:43 bkg 0.0010 0.0010 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg 0.0020 -- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Std Deviation: 0.000843 Mean : 0.000823 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.001011110.0010 | | | 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg 0.0020-- Multi-Test Full Report --: 5423, Th-228 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JAN-2002 00:00 End Date : -----Mean : 0.001263 Std Deviation: 0.001378 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 0.0070 |Ac| | 14-MAR-2006 05:18 bkg

0.0010

20-MAR-2006 06:25 bkg

⁻⁻ Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.001593 Std Deviation : 0.001754

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JAN-2002 00:00 End Date : ------

Mean : 0.001597 Std Deviation : 0.001848

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

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-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.005319 Std Deviation : 0.012911						
Measurement Time Sample ID Sample An						
14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg	0.0090 0.0090 0.0040					
Multi-Test Full Report						
Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide						
Investigate Level: 2.000000 Action Level: 3.000000						
Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.005130 Std Deviation : 0.013551						
Measurement Time Sample ID Sample An						
13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg 20-MAR-2006 06:25 bkg	0.0100 0.0090 0.0060					
Multi-Test Full Report						
Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide						
Investigate Level: 2.000000 Action Leve	1 : 3.00	0000				
Sample Driven N-Sigma Test Parameters Start Date : 1-JAN-2002 00:00 End Date : Mean : 0.000883						
Measurement Time Sample ID Sample Ar			LU SD UD BS Rej			
13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg	0.0000 0.0020					

20-MAR-2006 06:25 bkg

0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:34:08.78

QA Filename : \$DISK1:[ALP171.QA]GROUP_7_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.267912 Std Deviation : 0.004245

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2736 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.802722 Std Deviation : 0.339651

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 6.1667 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 337.800171 Std Deviation : 3.363381

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 337.3970 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.267798 Std Deviation : 0.003291

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.2701 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.651971 Std Deviation : 0.026119

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk

5.6439

Quality Assurance Report. Generated 26-MAY-2006 11:34:09.50

QA Filename : \$DISK1:[ALP171.QA]GROUP 7 BKG.QAF;1

-- Multi-Test Full Report --

Description

: 4010, Th-232 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000255

Std Deviation: 0.000518

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

0.0000 + 1 + 1

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000218

Std Deviation: 0.000534

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

 $0.0000 \mid \cdot \mid \cdot \mid$

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min

Parameter Type: Nuclide

Investigate Level: 2.000000

Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000218 Std Deviation : 0.000417 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg $0.0000 + | \cdot |$ -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000291 Std Deviation : 0.000567 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej -----Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej 0.0000 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000255 Std Deviation : 0.000585 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg $0.0000 \mid \cdot \mid \cdot \mid$

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000200 Std Deviation : 0.000487

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000182 Std Deviation : 0.000390

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000237 Std Deviation : 0.000470

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000309 Std Deviation: 0.000541 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg $0.0000 \mid \mid \mid \mid$ -- Multi-Test Full Report --: 5155, Pu-239 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.000510 Std Deviation: 0.000999 Value LU|SD|UD|BS Rej Measurement Time Sample ID Sample Analyst 13-MAR-2006 06:43 bkg 0.0000 + | + |-- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min)

Parameter Type: Nuclide

SIT:1//IRTGHHEAN Dip171 26-may-2006-11341163.txt (6 of 10)5/26/2006-832:15 AM

Investigate Level: 2.000000 Action Level: 3.000000

Parameter Units : cnts/min

file:///P]/Transfer/qa7_alp171_26-may-2006-11341163.txt ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean Std Deviation: 0.000577 : 0.000237 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 + | + |13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000291 Std Deviation: 0.000658 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 4 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 + | + |-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 : 0.000328 Std Deviation: 0.000772 Mean

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + 1 + 1

-- Multi-Test Full Report --

13-MAR-2006 06:43 bkg

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000218 Std Deviation : 0.000534

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000673 Std Deviation : 0.000945

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5499, Pu-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.000692 Std Deviation : 0.000961

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 13-MAR-2006 06:43 bkg -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Std Deviation: 0.002409 : 0.001856 Mean Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00 Mean : 0.001547 Std Deviation : 0.002716 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----

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Start Date

: 5-MAY-2003 00:00 End Date : 30-MAY-2030 00:00

Mean

: 0.000528

Std Deviation: 0.000901

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg

0.0000

Quality Assurance Report. Generated 26-MAY-2006 11:34:11.97

QA Filename : \$DISK1:[ALP171.QA]GROUP_8_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Pu-239

Parameter Units: % Parameter Type: Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.308462 Std Deviation : 0.004280

Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej

12-MAR-2006 10:09 chk 0.3080 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 7.141844 Std Deviation : 0.340465

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 7.5000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type : Peak

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 336.068970 Std Deviation : 8.085652

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 332.5354 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type: Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 0.000000 Upper Bound : 0.500000

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.307906 Std Deviation : 0.017497

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12-MAR-2006 10:09 chk 0.3127 | | |

-- Multi-Test Full Report --

Description : Energy Calibration Slope

Parameter Units : keV/chan Parameter Type : Generic

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 8-AUG-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 5.830454 Std Deviation : 0.237792

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

file:///P//Transfer/qa8_alp171_26-may-2006-11341510.txt 12-MAR-2006 10:09 chk 5.8738 | | | Quality Assurance Report. Generated 26-MAY-2006 11:34:12.70 QA Filename : \$DISK1:[ALP171.QA]GROUP 8 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Type: Nuclide Parameter Units : cnts/min Investigate Level: 2.000000 Action Level : 3.000000 ---- Sample Driven N-Sigma Test Parameters ----Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Mean : 0.000393 Std Deviation: 0.000630 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 14-MAR-2006 05:18 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0010 14-MAR-2006 05:18 bkg 0.0000 + +-- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide

Action Level: 3.000000

: 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Std Deviation: 0.000635

---- Sample Driven N-Sigma Test Parameters ----

Investigate Level: 2.000000

: 0.000572

Start Date

Mean

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
13-MAR-2006 06:43 14-MAR-2006 05:18	_	0.0010 0.0000			
Multi-Test Full Re	port				
-	Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level : 2.	000000	Action Level : 3.00	0000		
Sample Driven N-Sigma Test Parameters Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Mean : 0.000536 Std Deviation : 0.000882					
Measurement Time	-	Sample Analyst		LU SD UD BS Rej	
Quality Assurance M				Page : 2	
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
13-MAR-2006 06:43 14-MAR-2006 05:18	•	0.0000 0.0000			
Multi-Test Full Report					
Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide					
Investigate Level: 2.000000 Action Level: 3.000000					
Sample Driven N-Sigma Test Parameters Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Mean : 0.000429 Std Deviation : 0.000743					
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej	
13-MAR-2006 06:43 14-MAR-2006 05:18	_	0.0010 0.0000			
Multi-Test Full Rep	port				

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000322 Std Deviation : 0.000549

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000250 Std Deviation : 0.000519

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0020 |Ac| | 14-MAR-2006 05:18 bkg 0.0010 | |

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000250 Std Deviation : 0.000519

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

 	 ·

Quality Assurance Multi-Test Full Report (con	tinued) Page: 3
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Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
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13-MAR-2006 06:43 bkg 0.0020 |Ac| | 14-MAR-2006 05:18 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000286 Std Deviation : 0.000535

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

12 MAD 2007 07 42 11

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000679 Std Deviation : 0.000864

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000572 Std Deviation : 0.000921

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0000 | | | | 14-MAR-2006 05:18 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type: Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000751 Std Deviation : 0.001077

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 4

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

-- Multi-Test Full Report --

Description : 5320, U-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000858 Std Deviation : 0.001240

Measurement Time		Sample Analyst		
13-MAR-2006 06:43 14-MAR-2006 05:18	bkg bkg	0.0000 0.0010		
Multi-Test Full Rep	oort			
Description : 5423 Parameter Units : cn	_	·	clide	
Investigate Level : 2.0	000000	Action Level : 3.00	0000	
Sample Driven N-Sigma Test Parameters Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Mean : 0.000786 Std Deviation : 0.001032				
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej
13-MAR-2006 06:43 14-MAR-2006 05:18	bkg bkg	0.0020 0.0010		
Multi-Test Full Rep	port			
Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				
Investigate Level: 2.000000 Action Level: 3.000000				
Sample Driven N-Sigma Test Parameters Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Mean : 0.000894 Std Deviation : 0.001450				
Measurement Time	-	-		
13-MAR-2006 06:43 14-MAR-2006 05:18	bkg	0.0010 0.0020		
Multi-Test Full Report				
Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Nuclide				

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.000822 Std Deviation : 0.001443

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 5

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0010 | | | | 14-MAR-2006 05:18 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.007186 Std Deviation : 0.020985

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

13-MAR-2006 06:43 bkg 0.0030 | | |

14-MAR-2006 05:18 bkg 0.0040 | | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Nuclide

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00

Mean : 0.006256 Std Deviation : 0.020016

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

14-MAR-2006 05:18 bkg

0.0030 | | | 13-MAR-2006 06:43 bkg 14-MAR-2006 05:18 bkg 0.0030 -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Nuclide Investigate Level: 2.000000 Action Level: 3.000000 ---- Sample Driven N-Sigma Test Parameters ----: 1-JUL-2002 00:00 End Date : 1-JUL-2003 00:00 Start Date Mean : 0.000822 Std Deviation: 0.001417 Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 13-MAR-2006 06:43 bkg 0.0000 | | |

0.0010 | | |

Generated 26-MAY-2006 11:44:55.80 Quality Assurance Report. QA Filename : RDND06::RDND06\$DKA100:[ALP113.QA]GROUP_1_CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Pu-239 Parameter Units: % Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3340 -- Multi-Test Full Report --Description : Constant FWHM Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 5.8333 19-MAR-2006 10:06 chk -- Multi-Test Full Report --Description : Centroid, Pu-239 Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 312.5263 | | | -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: % Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3432 -- Multi-Test Full Report --

Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 7.6169 | | | 19-MAR-2006 10:06 chk -- Multi-Test Full Report --Description : Efficiency, Am-241 Parameter Units: % Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3340 ||| -- Multi-Test Full Report --Description : Centroid, Am-241 Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 19-MAR-2006 10:06 chk 356.5670 | | | Quality Assurance Report. Generated 26-MAY-2006 11:44:56.92 QA Filename : RDND06::RDND06\$DKA100:[ALP113.QA]GROUP | BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000

-- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000-- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : ents/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000-- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min

Measurement Time Sample ID

Sample Analyst Value LU|SD|UD|BS Rej

0.0000 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (ents/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0010 | | | 20-MAR-2006 07:19 bkg

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0010 | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5320, U-232 bkg (cnts/min)

Parameter Units : ents/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000

-- Multi-Test Full Report --

20-MAR-2006 07:19 bkg

Description : 5423, Th-228 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 3

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5486, Am-241 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 20-MAR-2006 07:19 bkg 0.0010 -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0040 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --: 5805, Cm-244 bkg (cnts/min) Description Parameter Units : ents/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0040 -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej $0.0000 \mid \cdot \mid \cdot \mid$ 20-MAR-2006 07:19 bkg

Generated 26-MAY-2006 11:45:05.25 Quality Assurance Report. QA Filename : RDND06::RDND06\$DKA100:[ALP114.QA]GROUP_1_CHK.QAF;1 -- Multi-Test Full Report --Description : Efficiency, Pu-239 Parameter Units: Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.4107 | | | -- Multi-Test Full Report --Description : Constant FWHM Parameter Units : channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 7.3333 19-MAR-2006 10:06 chk -- Multi-Test Full Report --Description : Centroid, Pu-239 Parameter Units : channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 301.0902 -- Multi-Test Full Report --Description : Average Efficiency Parameter Units: Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3319 -- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.4107 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 346.4391 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:45:06.23

QA Filename : RDND06::RDND06\$DKA100:[ALP114.QA]GROUP_1_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units : ents/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4776, U-234 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4788, Np-237 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0010 | | |

-- Multi-Test Full Report --

Description : 4845, Th-229 bkg (ents/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

Quality Assurance Multi-Test Full Report (continued) Page: 2

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _______ 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 20-MAR-2006 07:19 bkg 0.0000-- Multi-Test Full Report --Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej 0.0000 + | + |20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1.000-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0020 -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0030 | | | -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0030 | | | -- Multi-Test Full Report --: 5770, Pu-236 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 11-- Multi-Test Full Report --: 5805, Cm-244 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 6113, Cm-242 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0030 | | | 20-MAR-2006 07:19 bkg

Generated 26-MAY-2006 11:45:19.26 Quality Assurance Report. OA Filename : RDND06::RDND06\$DKA100:[ALP116.QA]GROUP 1 CHK.QAF;2 -- Multi-Test Full Report --Description : U-238 Centroid Parameter Units: channel Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 179.6069 -- Multi-Test Full Report --: Constant FWHM Description Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 9.0000 | | | -- Multi-Test Full Report --: Cf-252 Centroid Description Parameter Units: channels Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 435.0617 | | | -- Multi-Test Full Report --: Average Efficiency Description Parameter Units : counts/decay Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.1746 -- Multi-Test Full Report --

Description : Am-241 Efficiency

Parameter Units : counts/decay Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.1759 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:45:20.17

QA Filename : RDND06::RDND06\$DKA100:[ALP116.QA]GROUP_1_BKG.QAF;1

-- Multi-Test Full Report --

Description : 4010, Th-232 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4196, U-238 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4688, Th-230 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Type: Parameter Units : ents/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + | + |-- Multi-Test Full Report --: 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4882, Po-209 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0020 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5305, Po-210 bkg (cnts/min) Parameter Units : ents/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0040 | | | -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0030 | | | -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0030 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5770, Pu-236 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg

20-MAR-2006 07:19 bkg 0.0040 | | | -- Multi-Test Full Report --Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0040 | | | -- Multi-Test Full Report --: 6113, Cm-242 bkg (cnts/min) Description Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0010 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:45:27.19

QA Filename : RDND06::RDND06\$DKA100:[ALP117.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.3411 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 6.5000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 361.5403 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 28-SEP-2005 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.340942 Std Deviation : 0.002303

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3441 | | | -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 7.4599 ||| 19-MAR-2006 10:06 chk Quality Assurance Report. Generated 26-MAY-2006 11:45:28.09 OA Filename : RDND06::RDND06\$DKA100:[ALP117.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4901, Pu-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej | | | | 0.000020-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5155, Pu-239 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0004 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
20-MAR-2006 07:19	bkg	0.0004					
Multi-Test Full Report							
Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
20-MAR-2006 07:19	bkg	0.0000		 ·			
Multi-Test Full Rep	ort						
Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
20-MAR-2006 07:19	bkg	0.0000					
Multi-Test Full Rep	oort						
Description : 5805, Cm-244 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time		Sample Analyst		LU SD UD BS Rej			
20-MAR-2006 07:19		0.0016		·			
Multi-Test Full Report							
Description : 6113, Cm-242 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time	_	_					
Quality Assurance Multi-Test Full Report (continued) Page : 2							
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
20-MAR-2006 07:19	bkg	0.0000		- 			

-- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Type: Parameter Units : cpm Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Type: Parameter Units : cpm Measurement Time Sample ID Sample Analyst Value LU[SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0004 | | | -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Type: Parameter Units : cpm Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 -- Multi-Test Full Report --: 5423, Th-228 bkg (cnts/min) Description Parameter Units: cpm Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + | + |

20-MAR-2006 07:19 bkg

Quality Assurance Report. Generated 26-MAY-2006 11:45:40.43

QA Filename : RDND06::RDND06\$DKA100:[ALP118.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.3479 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 7.0000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 345.5653

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-DEC-2003 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.333433 Std Deviation : 0.091930

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.3507 | | | -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 19-MAR-2006 10:06 chk 7.6375 | | | Quality Assurance Report. Generated 26-MAY-2006 11:45:41.65 OA Filename : RDND06::RDND06\$DKA100:[ALP118.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 20-MAR-2006 07:19 bkg 0.0008 | | | -- Multi-Test Full Report --Description : 4196, U-238 bkg (ents/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej 0.0004 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

							
20-MAR-2006 07:19		0.0000					
Multi-Test Full Report							
Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time		Sample Analyst		LU SD UD BS Rej			
20-MAR-2006 07:19		0.0016					
Multi-Test Full Rep	oort						
Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
20-MAR-2006 07:19	bkg	0.0016					
Multi-Test Full Report							
Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time		Sample Analyst					
20-MAR-2006 07:19		0.0012					
Multi-Test Full Report							
Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type :							
Measurement Time	Sample ID	Sample Analyst	Value	LU SD UD BS Rej			
Quality Assurance M	Page: 2						
Measurement Time	=	Sample Analyst		LU SD UD BS Rej			
20-MAR-2006 07:19		0.0000					

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0004

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0008 | | | 20-MAR-2006 07:19 bkg

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0020 | | |

20-MAR-2006 07:19 bkg

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0012 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0004 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0004 | | | -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0024 | | | -- Multi-Test Full Report --: 5486, Am-241 bkg (cnts/min) Description Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0032 | | | -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0032 | | | -- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0024 | | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0024 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

Quality Assurance Report. Generated 26-MAY-2006 11:45:48.69

QA Filename : RDND06::RDND06\$DKA100:[ALP119.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.2522 | | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units: channels Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 9.1667 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 354.0634 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 10-DEC-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.260673 Std Deviation : 0.004703

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 19-MAR-2006 10:06 chk 0.2559 -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 19-MAR-2006 10:06 chk 7.4469 | | | Quality Assurance Report. Generated 26-MAY-2006 11:45:50.23 OA Filename : RDND06::RDND06\$DKA100:[ALP119.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --

SIT: 1/1RTGH-1e-AN Dtp119 26-may-2006-11455457.txt (2 of 6)5/26/2006 5.96.15 AM

Description : 4396, U-235 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 20-MAR-2006 07:19 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1 + 1-- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg -0.0000 + + +

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU[SD[UD]BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Units: cnts/min Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + | + |20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5320, U-232 bkg (ents/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0010 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0030 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0010 |||

Quality Assurance Report. Generated 26-MAY-2006 11:46:03.45

QA Filename : RDND06::RDND06\$DKA100:[ALP120.QA]GROUP_1_CHK.QAF;1

-- Multi-Test Full Report --

Description : Efficiency, Am-241

Parameter Units: % Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 0.2446 | |

-- Multi-Test Full Report --

Description : Constant FWHM

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 9.5000 | | |

-- Multi-Test Full Report --

Description : Centroid, Am-241

Parameter Units : channels Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

19-MAR-2006 10:06 chk 357.1586 | | |

-- Multi-Test Full Report --

Description : Average Efficiency

Parameter Units: % Parameter Type:

Investigate Level: 2.000000 Action Level: 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 10-DEC-2000 00:00 End Date : 30-MAY-2030 00:00

Mean : 0.245043 Std Deviation : 0.003514

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej ______ 19-MAR-2006 10:06 chk 0.2444 | | | -- Multi-Test Full Report --Description : Energy Calibration Slope Parameter Units: keV/chan Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _______ 19-MAR-2006 10:06 chk 7.3827 | | | Quality Assurance Report. Generated 26-MAY-2006 11:46:04.73 QA Filename : RDND06::RDND06\$DKA100:[ALP120.QA]GROUP 1 BKG.QAF;1 -- Multi-Test Full Report --Description : 4010, Th-232 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 | | | -- Multi-Test Full Report --Description : 4196, U-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0010 | | | -- Multi-Test Full Report --Description : 4396, U-235 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0000 + | + |20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4688, Th-230 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4776, U-234 bkg (cnts/min) Parameter Units: cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4788, Np-237 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej _____ 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 4845, Th-229 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 2 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0000 + 1.1

-- Multi-Test Full Report --

Description : 4882, Po-209 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU[SD]UD[BS Rej

20-MAR-2006 07:19 bkg 0.0000 + 1.000

-- Multi-Test Full Report --

Description : 4901, Pu-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 + 1 +

-- Multi-Test Full Report --

Description : 5155, Pu-239 bkg (cnts/min)

Parameter Type: Parameter Units : cnts/min

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

0.0010 | | |

20-MAR-2006 07:19 bkg

-- Multi-Test Full Report --

Description : 5275, Am-243 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type:

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0000 | | |

-- Multi-Test Full Report --

Description : 5305, Po-210 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg

-- Multi-Test Full Report --Description : 5320, U-232 bkg (cnts/min) Parameter Type: Parameter Units : cnts/min Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0000 | | | 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --Description : 5423, Th-228 bkg (cnts/min) Parameter Units : cnts/min Parameter Type: Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej Quality Assurance Multi-Test Full Report (continued) Page: 3 Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 5486, Am-241 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 20-MAR-2006 07:19 bkg 0.0020 | | | -- Multi-Test Full Report --Description : 5499, Pu-238 bkg (cnts/min) Parameter Units : cnts/min Parameter Type : Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej 0.0020 ||| 20-MAR-2006 07:19 bkg -- Multi-Test Full Report --

0.0000 | | |

Description : 5770, Pu-236 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 5805, Cm-244 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0020 | | |

-- Multi-Test Full Report --

Description : 6113, Cm-242 bkg (cnts/min)

Parameter Units : cnts/min Parameter Type :

Measurement Time Sample ID Sample Analyst Value LU|SD|UD|BS Rej

20-MAR-2006 07:19 bkg 0.0020 | | |